

10 1/4 x 6 1/4

CURTIS'S  
BOTANICAL MAGAZINE,

COMPRISING THE

Plants of the Royal Gardens of Kew

AND

OF OTHER BOTANICAL ESTABLISHMENTS IN GREAT BRITAIN;  
WITH SUITABLE DESCRIPTIONS;

BY

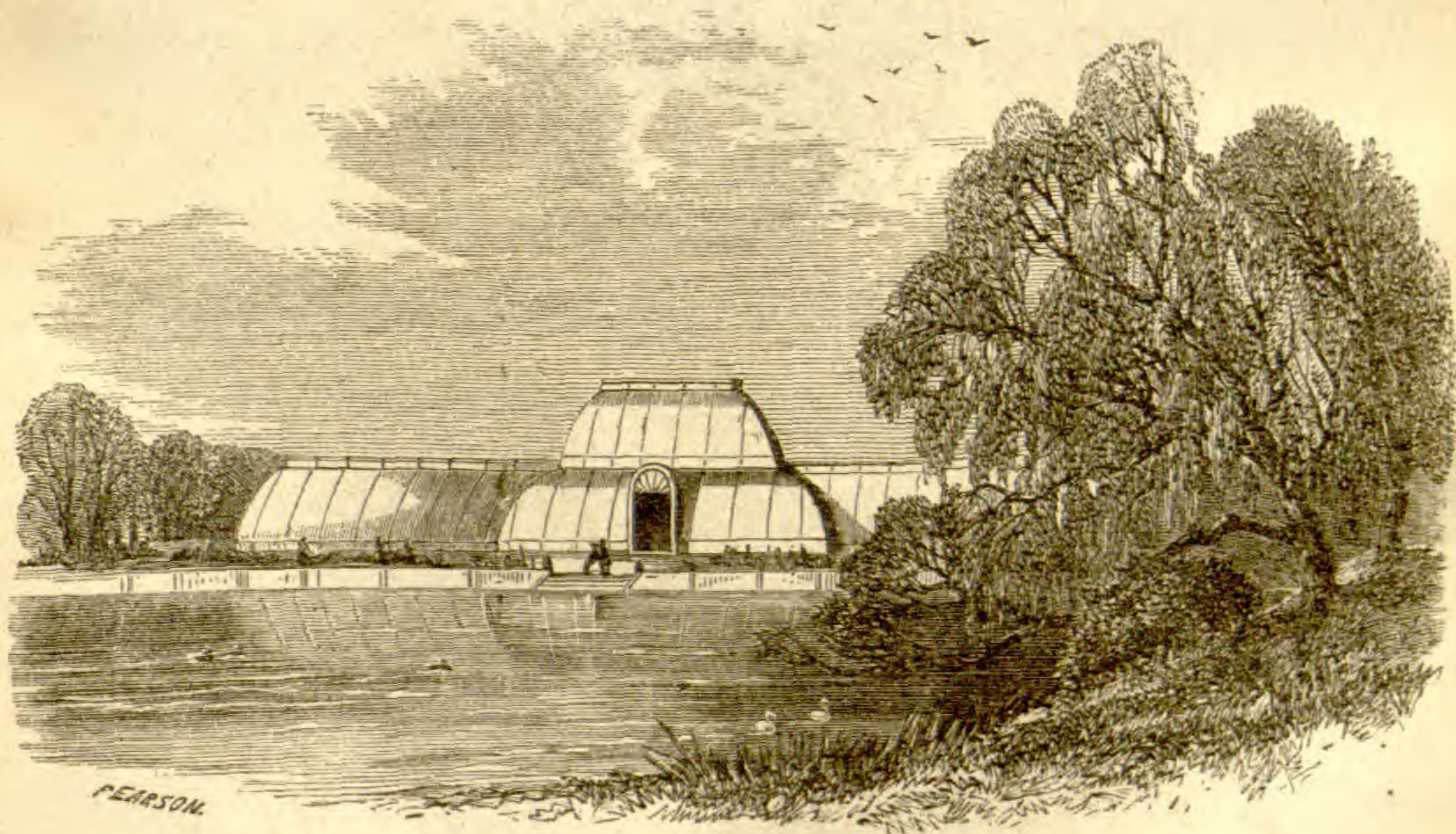
JOSEPH DALTON HOOKER, M.D., F.R.S. L.S. & G.S.,

D.C.L. OXON., LL.D. CANTAB., CORRESPONDENT OF THE INSTITUTE OF FRANCE.

VOL. XXIII.

OF THE THIRD SERIES;

(Or Vol. XCIII. of the Whole Work.)



"The earth's embroidery then have ye eyed,  
And smile of blossoms, purple, red, and white;  
Their vernal-tinctured leaves, luxurious, dyed  
In Flora's livery, painted by the light."

W. Thomson.

LONDON:

L. REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

1867.

Mo. Bot. Garden,

1837.





J. E. TAYLOR AND CO., PRINTERS,  
LITTLE QUEEN STREET, LINCOLN'S INN FIELDS.



TO

DANIEL OLIVER, F.R.S., F.L.S.,

KEEPER OF THE HERBARIUM AND LIBRARY IN THE ROYAL GARDENS, KEW,  
AND PROFESSOR OF BOTANY IN UNIVERSITY COLLEGE, LONDON.

MY DEAR OLIVER,—

*In dedicating this Volume to you, I am desirous of recording the services you have rendered me, not only in its preparation and in that of the previous volumes published under my authorship; but as the efficient Keeper of that Herbarium and Library, upon the perfect order and scientific arrangement of which the 'BOTANICAL MAGAZINE' is dependent for whatever scientific merit it possesses.*

*Ever affectionately yours,*

JOS. D. HOOKER.

ROYAL GARDENS, KEW,  
December 1, 1867.



Third Series.

No. 265.

VOL. XXIII. JANUARY.

[Price 3s. 6d. col<sup>d</sup>. 2s. 6d. plain.]

OR No. 960 OF THE ENTIRE WORK.

CURTIS'S  
BOTANICAL MAGAZINE,

COMPRISING

THE PLANTS OF THE ROYAL GARDENS OF KEW,  
AND OF OTHER BOTANICAL ESTABLISHMENTS IN GREAT BRITAIN,  
WITH SUITABLE DESCRIPTIONS;

BY

JOSEPH DALTON HOOKER, M.D., F.R.S. L.S. & G.S.,  
Director of the Royal Botanic Gardens of Kew.



Nature and Art to adorn the page combine,  
And flowers exotic grace our northern clime.

LONDON:

REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

1867.  
Mo. Bot. Garden,



# NOTICE TO FRUIT GROWERS

---

J. HOUSE,

EASTGATE NURSERY, PETERBOROUGH,

IS NOW PREPARED TO SEND OUT

THE SEEDLING APPLE, "LORD BURGHLEY,"

FOR WHICH HE WAS AWARDED

A FIRST-CLASS CERTIFICATE

AT THE

ROYAL HORTICULTURAL SOCIETY, MARCH 21st, 1865.

---

In the 'Journal of Horticulture and Cottage Gardener' of March 28th, 1865, the following notice appears in connection with the Fruit Committee of the Royal Horticultural Society (Geo. F. Wilson, Esq., F.R.S., in the chair):—"A seedling Apple, of unusual excellence at this season of the year, was exhibited by Mr. House, of Peterborough, and which has been named 'Lord Burghley.' It is of medium size, roundish, and slightly flattened; is somewhat bluntly angular on the side, and ridged on the apex, this being caused by the prominent termination of the side angles. The skin, on the shaded side, is of a deep golden-yellow, and on that next the sun of a deep clear shining crimson. The whole surface is dotted over with large russet specks, like the Golden Reinette. The eye is somewhat closed, and set in a pretty deep basin, which is uneven, in consequence of the angles which terminate there. Stalk half an inch to three-quarters long, frequently a mere knob. Flesh yellowish, very tender, leaving but little mark in the mouth, very juicy, sweet, and with a fine pine flavour and rich aroma. This delicious Apple is now in perfection, and has the appearance as if it would keep for two months hence. Apart from its excellent quality, it is highly ornamental, and has a tenderness of flesh, and a flavour similar and equal to Cox's Orange Pippin. It was awarded a first-class certificate."

In the 'Gardeners' Chronicle' of the 25th of March, 1865:—"A valuable hardy-looking seedling Apple, named Lord Burghley, from Mr. House, of Peterborough, to which a certificate was awarded."

THE FOLLOWING TESTIMONIALS HAVE ALSO BEEN RECEIVED BY MR. HOUSE:—

*Messrs. Rivers and Co., Sawbridgeworth, March 15th, 1865.*

Sir,—Your Apple is remarkably handsome and sound, and one of the finest dessert apples known.

*Messrs. Lee and Co., Hammersmith, March 22nd, 1865.*

Sir,—The Apple you exhibited yesterday was very sound and good flavoured.

*Mr. J. R. Pearson, Chilwell, March 17th, 1865.*

Sir,—Your Apple is the best I know of.

*Mr. Matheson, Gardener at Burghley Hall, Stamford, March 24th, 1865.*

Sir,—Your dessert Apple is the best I have ever seen.

*Mr. Davie, Gardener at Orton Hall, April 7th, 1865.*

Sir,—Your Apple is remarkably sound, handsome, and excellent in flavour.

After the Testimonials from such eminent Fruit Growers as those enumerated, nothing more need be added by J. H. to assure those who plant this Apple that they may anticipate the most satisfactory results.

**Price of fine Maiden Trees, 5s. The usual allowance to the Trade.**

*The Stock being limited, the price cannot be reduced before the year 1868.*

EASTGATE NURSERY, PETERBOROUGH, DECEMBER, 1866.



# BOTANICAL MAGAZINE ADVERTISER.

## VARIEGATED PELARGONIUM "METEOR," SALTMARSH AND SON'S.

This beautiful variety, to which a First-Class Certificate was awarded at a meeting of the Royal Horticultural Society, will be sent out on the 1st of May, 1867, with a few others by the same raisers, at 21s. each. The usual discount to the Trade. Orders will be executed in strict rotation. Further particulars will appear in future advertisements.

SALTMARSH AND SON, MOULSHAM NURSERIES, CHELMSFORD.

GENUINE



SEEDS.

## JAMES VEITCH AND SONS

BEG TO ANNOUNCE THAT THEIR

CATALOGUE OF KITCHEN GARDEN AND FLOWER SEEDS FOR 1867,

WITH LIST OF IMPLEMENTS AND OTHER GARDEN REQUISITES,

Is now Published, and will be forwarded free on application.

THE ROYAL EXOTIC NURSERY, KING'S ROAD, CHELSEA, LONDON, S.W.

FINEST NAMED



HYBRID GLADIOLI.

## JAMES VEITCH AND SONS

HAVE MUCH PLEASURE IN OFFERING

FINE BULBS OF ALL THE BEST NAMED VARIETIES IN CULTIVATION.

Choice Selections at 5s., 10s., 15s., 24s., and 36s. per dozen.

TWELVE SPLENDID NOVELTIES OF THIS YEAR'S INTRODUCTION FOR 63s.

GLADIOLUS BRENCHLEYENSIS, per doz. 3s.; per	100, 21s.
" FLORIBUNDUS, per doz., 2s. 6d.; per	100, 15s.
" GANDAVENSIS, per doz., 1s. 6d.; per	100, 10s. 6d.
" NE PLUS ULTRA, per doz., 1s. 9d.;	per 100, 12s. 6d.

GLADIOLUS INSIGNIS, per doz., 4s.; per 100, 30s.	
" CARDINALIS, per doz., 1s. 9d.; per	100, 12s. 6d.
" PSITTACINUS, per doz., 1s.; per 100,	6s.
" SEEDLINGS, per doz. 6s.; per 100,	42s.

FINEST DOUBLE ITALIAN TUBEROSES, per doz., 3s.

DETAILED DESCRIPTIVE CATALOGUES POST-FREE ON APPLICATION.

ROYAL EXOTIC NURSERY, KING'S ROAD, CHELSEA, S.W.

*Now ready, Royal 4to, with 10 coloured Plates, 10s. 6d., Part V. of*

## A SECOND CENTURY OF ORCHIDACEOUS PLANTS,

Selected from the subjects published in Curtis's 'Botanical Magazine' since the issue of the 'First Century.'

Edited by JAMES BATEMAN, Esq., F.R.S.

To be completed in Ten Parts. Part VI. will be published February 1st.

REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.



## MR. HARDWICKE'S PUBLICATIONS.

**SOWERBY'S ENGLISH BOTANY.** The Sixth Volume of this splendid work is now ready. Scientific and popular Descriptions, with Hand-painted Figures. Subscribers to this great national undertaking may commence at any time without buying the back numbers all at once. Prospectuses and specimen gratis.

**POPULAR SCIENCE.** All who wish to become acquainted with the leading topics of interest in the scientific world should take in the 'POPULAR SCIENCE REVIEW.' The articles are contributed by writers of established reputation in their various departments, and illustrated by the first artists of the day. The Fifth Volume is just complete, 540 pages letterpress, 22 whole-page Plates, price 12s. cloth; 14s. 6d. half-morocco. Complete sets may still be had. Price in numbers, £2. 12s. 6d.; bound in 5 vols. cloth, £3. 2s. 6d.; or in half-morocco, £3. 15s. The New Vol. commences Jan. 1.

**INDUSTRIES OF BIRMINGHAM AND THE MIDLAND HARDWARE DISTRICTS.** The 'Examiner' says:—"It is a work to be thankful for, and worth study at home and abroad. A wonderfully complete account of the trading life of a great English trading town, and is in its way the best addition that has been made to commercial literature for many a day." The 'Society of Arts Journal' says:—"As an addition to the Libraries of Mechanics' Institutions and Working Men's Clubs, not forgetting Free Libraries, it will be valuable, and will be received on the Continent with a hearty welcome." 750 pages, 8vo, cloth, price 14s.

Just published, pp. 54, price 1s.,

**ON UNCONTROLLABLE DRUNKENNESS,** considered as a Form of Mental Disorder. With Suggestions for its Treatment, and the Organization of Sanatoria for Dipsomaniacs. By FORBES WINSLOW, M.D., D.C.L. Oxon.

Crown 8vo, cloth, price 10s. 6d.,

**OBSCURER DISEASES OF THE BRAIN AND MIND.** Third edition, revised.

Crown 8vo, cloth, 800 pages, price 10s. (postage 10d.),

**MR. COOLEY'S WORK ON THE TOILET AND COSMETIC ARTS** should be in the dressing-room of every one who values health and personal appearance. "Is a perfect repertory of all that is known on this most profoundly interesting subject, and as such deserves the widest circulation."—*Court Journal*.

Crown 8vo, cloth, price 5s.,

**ON DISEASES OF THE STOMACH, THE VARIETIES OF DYSPEPSIA, THEIR DIAGNOSIS AND TREATMENT.** By SAMUEL O. HABERSHON, M.D. Lond., F.R.C.P., Physician to Guy's Hospital.

4d. Monthly; Vols. 1 and 2, in cloth, price 5s. each, now ready,

**HARDWICKE'S SCIENCE GOSSIP ABOUT ANIMALS,** Aquaria, Bees, Beetles, Birds, Butterflies, Ferns, Fish, Fossils, Lichens, Microscopes, Mosses, Reptiles, Rocks, Seaweeds, Wildflowers, etc.

Crown 8vo, cloth, fully Illustrated, price 6s.,

**FERNS, BRITISH AND FOREIGN:** their History, Organography, Classification, Nomenclature, and Culture; with Directions, showing which are the best adapted for the Hothouse, Greenhouse, Open-air Fernery, or Wardian Case. With an Index of Genera, Species, and Synonyms. By J. SMITH, A.L.S. With nearly 200 Woodcuts. Mr. Smith is acknowledged to be one of the first authorities on Ferns, having been engaged for nearly half a century in arranging them at Kew.

Fcap. 8vo, cloth, price 6s.,

**SHOOTING SIMPLIFIED:** a Concise Treatise on Guns and Shooting. Second Edition, Re-written and Enlarged, with a Special Chapter on Breech-Loaders. By JAMES DALZIEL DOUGALL, Author of 'Scottish Field Sports,' etc.

Crown 8vo, cloth, price 2s. 6d.,

**DOZENS versus TENS;** or the Ounce, the Inch, and the Penny, considered as Standards of Weight, Measure, and Money, and with reference to a Duodecimal Notation. By THOMAS LEECH, F.C.S.

Small 4to, price One Guinea,

**THE AUTOGRAPHIC ALBUM:** a Collection of 470 Facsimiles of Holograph Writings of Royal, Noble, and Distinguished Men and Women of various Nations. For Librarians, Autograph Collectors, and Literary Men. With Biographical Notices and Occasional Translations. By LAWRENCE R. PHILLIPS, F.R.A.S.

DR. WYNTER'S NEW WORK,

**THE NEW SERIES OF 'OUR SOCIAL BEES'** is now ready, Price 6s., and Contains among other interesting Articles:—London Omnibuses—Our Furniture—Horses and Horse Copers—Dipsomania—School of Cookery—Sweets for the Million—Death in the Match Box—Human Wasters—City Companies—Photo-sculpture—"Old Clo'"—Longevity—Word about Wines—False Hair—Precious Stones—Our Life-Boats—Birth of the Steam Engine, etc.

OUR SOCIAL BEES. First Series, Eighth Edition, price 6s.

CURIOSITIES OF CIVILIZATION. Seventh Edition, price 6s.

BRAINS AND FINGERS. Second Edition, price 6s.

LONDON: ROBERT HARDWICKE, 192, PICCADILLY, W.



**NEW WORKS.**

DEDICATED, BY SPECIAL PERMISSION, TO  
**H.R.H. FIELD-MARSHAL THE DUKE OF CAMBRIDGE.**

*Now Ready, in an elegant volume, Royal 4to, with Thirty-five original Sketches beautifully printed in colours, Price Two Guineas,*

# LIVE COALS; OR, FACES FROM THE FIRE.

By MISS BUDGEN,

"ACHETA,"

AUTHOR OF 'EPISODES OF INSECT LIFE,' ETC.

Comprising a Series of Thirty-five highly imaginative and humorous Sketches, suggested by burning Coals and Wood, accompanied by Essays, descriptive and discursive, on—

THE IMAGERY OF ACCIDENT.

THE FIRE AN EXHIBITOR.

THE FIRE IN A NEW LIGHT.

THE FIRE A SCULPTOR.

METEORS, AEROLITES, AND FALLING STARS. By Dr. T. L. PHIPSON. Crown 8vo. Woodcuts and Lithographic Frontispiece. 6s.

THE REASONING POWER IN ANIMALS. By the Rev. J. S. WATSON. Crown 8vo. [Nearly ready.]

FLORA AUSTRALIENSIS. By G. BENTHAM. Vol. III. Demy 8vo, 20s.

HANDBOOK OF THE NEW ZEALAND FLORA. By Dr. HOOKER. Part II.

THE BOTANICAL MAGAZINE. Edited by Dr. J. D. HOOKER, F.R.S. Vol. XXII. [In a few days.]  
 of the Third Series. 72 coloured Plates. 42s.

THE FLORAL MAGAZINE. Edited by the Rev. H. H. DOMBRAIN. Vol. V. 64 coloured Plates. 42s.

REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

The Records of 10,763 Cures of Asthma, Consumption, and other Disorders of the Throat and Lungs by



Have been published in the last Twelve Months.

The benefit to society which has resulted from the discovery of this medicine is, however, far greater than these figures show, as many thousands of cures are effected, and not made known out of the circle of the friends of the parties.

CURE (this Week) OF SEVERE COUGH.—Mr. Malcom, Publisher, 'Christian News,' Glasgow, writes Nov. 14th, 1866 :—"My mother had a very severe cough, and tried almost everything without effect, and we were astonished to find that the second night after using the Wafers her cough was removed."

TO SINGERS AND PUBLIC SPEAKERS, DR. LOCOCK'S WAFERS are invaluable for clearing and strengthening the voice, and have a pleasant taste.

DR. LOCOCK'S WAFERS are sold by every Medicine Dealer throughout the world, in boxes, at prices ranging from 1s. 1½d. to 11s., so as to meet the circumstances of all ranks.

Be careful to see the name in the Government stamp.

Under Royal Patronage.

## DR. LOCOCK'S POWDERS

FOR ALL

DISORDERS OF CHILDREN, FROM BIRTH TO TWELVE YEARS OF AGE.

No family should be without them, in case of sudden illness at night or day.

With every Packet is given Plain Rules for the Management and Diet of Infants in SICKNESS and in HEALTH.

CHILDREN CUTTING THEIR TEETH are speedily relieved by these Powders.

Sold by all Druggists, in Packets, at 1s. 1½d., 2s. 9d., and 4s. 6d.



# 1867.

## FIRST WEEK IN JANUARY

WILL BE PUBLISHED

### FIRST EDITION (25,000)

OF

# BARR AND SUGDEN'S GUIDE

## TO THE KITCHEN AND FLOWER GARDEN.

A COPY

WILL BE PRESENTED TO EACH CUSTOMER.

INTENDING PURCHASERS

WILL ALSO BE PRESENTED WITH COPIES ON SENDING THEIR ADDRESSES

## THE GUIDE

WILL EMBRACE EVERY NOVELTY AND SPECIALITY WORTHY OF NOTICE IN

### FLOWER AND VEGETABLE SEEDS.

Vegetable Seeds Carriage Paid.

**COLLECTIONS OF VEGETABLE SEEDS**  
10/6, 21/., 30/., 42/., 63/., 84/., 105/., to 210/.

Flower Seeds Post Paid.

**COLLECTIONS OF FLOWER SEEDS**  
3/6, 5/6, 7/6, 10/6, 15/., 21/., 42/., 63/., 84/.,  
105/., to 210/.

*For full particulars of these Collections see the Guide.*

BARR AND SUGDEN, 12, KING STREET, COVENT GARDEN, W.C.







TAB. 5618.

CATTLEYA DOWIANA.

*Captain Dow's Cattleya.*

Nat. Ord. ORCHIDÆ.—GYNANDRIA MONANDRIA.

*Gen. Char. (Vide supra, TAB. 4700).*

CATTLEYA *Dowiana*; pseudobulbis validis clavatis sulcatis monophyllis, foliis lato-oblongis obtusis, spathâ obtusâ pedunculo 2-6-floro subæquali, floribus speciosissimis, sepalis lanceolatis acutis sessilibus planis, petalis plus quam duplo latioribus margine contortis obtusiusculis labello subæqualibus, labello maximo obscure trilobo oblongo emarginato crispo disco lævi amplissimo velutino atro-purpureo venis aureis pulcherrime ornato, columnâ subarcuatâ labello ferè obtectâ et labello 3-plo brevior.

CATTLEYA *Dowiana*. *Bateman in Gard. Chron., Oct. 1866.*

This superb Cattleya was originally discovered by Warszewicz in Costa Rica, and by him plants were forwarded to this country; but arriving in bad condition they eventually died. The dried specimens moreover that accompanied the living plants seem to have been mislaid or destroyed, so that during the last ten years doubts had come to be entertained as to the existence of a really distinct species of such unexampled beauty as that which the letters of the veteran traveller described. And in the mean time his name was given to another supposed species respecting which the greatest confusion now prevails, and which, whether or not it be a mere variety of *C. Mossiæ (labiata)*, is at all events perfectly different from the glorious thing to which even the double plate on the opposite page fails to do adequate justice.

Fortunately for the lovers of fine Orchids the plant, such as Warszewicz originally described it, was rediscovered in 1864 by M. Arce, a zealous naturalist who was and is still busily engaged in collecting birds, insects, and plants, for Mr. Salvin and Mr. Skinner, throughout some of the richest portions of Costa Rica. The plants which Arce sent home

JANUARY 1ST, 1867.



were purchased by Messrs. Veitch and Son, in whose establishment at Chelsea one of them flowered for the first time in the autumn of 1865. To their liberality I am myself indebted for a specimen that subsequently flowered at Knypersley and which was (in the autumn of 1866) exhibited at one of the Tuesday meetings of the Royal Horticultural Society at South Kensington. From this Mr. Fitch's drawing was made. Beautiful as the latter is, it probably gives but a poor idea of what the plant will ultimately become, for the native specimens in Messrs. Veitch's possession have some of them borne as many as five or six flowers on a scape.

Utterly unlike as are the nankeen and purple colours of our plant to those of every other *Cattleya*, still as colour alone is scarcely considered a sufficient botanical distinction, and as in the mere form of its flowers *C. Dowiana* comes very near to some of the many varieties of *C. Mossiæ*, there was for a while some doubt on my mind as to whether it might not eventually have itself to be ranked among the number, especially as *C. pallida*, which has been shown (see Tab. 5504) to be undistinguishable from other forms of *C. labiata*, has been found by Hartweg as far north as Oaxaca. I have lately however seen a letter from Messrs. Low's Costa Rica collector, who, after announcing his discovery of what he then supposed to be a new *Cattleya*, goes on to describe the colours, which are precisely those of *C. Dowiana*, thus proving at all events that the latter is not given to sport or change, and I am therefore now fully disposed to believe that it is essentially distinct from all other members of the genus. Be this as it may, it is a worthy plant to bear the name of a gallant officer in the American Packet service, the well-known Captain J. M. Dow, to whom I have great pleasure in dedicating it, as some slight acknowledgment of the many kindnesses shown and the frequent assistance rendered to English naturalists and men of science who have been so fortunate as to come in his way in their passage along the coasts of the Pacific.

*C. Dowiana* is very easily grown, but the warmest end of the *Cattleya* house seems to suit it best.

DESCR. *Pseudobulbs* eight inches to a foot high, slender at the base but very much swollen in their upper portion, furrowed. *Leaves* one on each pseudobulb, oblong, thick, and rather broad for the genus, from a span to a foot long. *Peduncle* two- to six-flowered, exceedingly stout, about six inches long, proceeding from a *spathe* somewhat shorter than itself. *Flowers* very large and beautiful, nankeen-coloured with the exception of the lip, their total expansion nearly



seven inches. *Sepals* lanceolate, acute, sessile, smooth at the edges. *Petals* more than twice as broad as the sepals, about the same length as the lip, somewhat obtuse, very much waved at the margin. *Lip* oblong, crisp, very large and prominent, of a substance resembling dark purple velvet beautifully and uniformly streaked with golden threads radiating from its centre, where they meet three other golden lines passing longitudinally. It is obscurely three-lobed, the lateral lobes being gathered round so as almost to conceal the column; the central lobe emarginate, very large, with its edges exceedingly curled. *Column* not more than one third the length of the lip.—*J. B.*







TAB. 5619.

BOWIEA VOLUBILIS.

*Twining Bowiea.*

---

Nat. Ord. LILIACEÆ.—HEXANDRIA MONOGYNIA.

*Gen. Char.* Flores abortu monoici. *Perianthium* 6-partitum, herbaceum, laciniis patenti-reflexis lineari-subulatis apicibus incurvis glandulosis. *Stamina* hypogyna, in fl. ♀ imperfecta, minuta, in fl. ♂ filamentis lineari-subulatis; *antheræ* oblongæ, 2-loculares. *Ovarium* conico-hemisphæricum, lata basi sessile, 3-loculare; *stylus* breviusculus, rectus, stigmate capitato 3-lobo; *ovula* in loculis ad 6. *Capsula* oblongo-conica, obtusa, 3-gona, membranacea, loculicide 3-valvis, polysperma. *Semina* irregulariter oblonga, compressa; testa laxa membranacea, atra, splendila.—Herba aphylla. Tuber globosum, carnosum, apice nudum v. squamis paucis parvis triangulari-subulatis circa basin pedunculi imbricatis coronatum. Pedunculus floriferus volubilis, viridis, carnosulus, ramosissimus, ramis inferioribus ramulosis, ramulis dichotomis divaricatis teretibus corniculatis non flori-feris, superioribus in pedicellis elongatis curvis desinentibus. Flores inter minores, virides.

---

BOWIEA volubilis. Harv. mss.

---

Though possessing little beauty, this is certainly one of the most curious plants ever introduced into Europe, and is further perfectly new to science; for though in botanical characters allied to *Drimia* and *Scilla*, in habit and general appearance it is like no other plant whatever. It consists of little more than a globose, fleshy, almost tuberous, green bulb, from the apex of which ascends yearly a very slender, twining, green flower-stem, six to eight feet high, that throws off an abundance of compound, curving, flowerless branches below, and above bears numerous small, green flowers. For several years a specimen of this plant, sent to the Royal Gardens by Henry Hutton, Esq., of Grahamstown, was an object of great curiosity at Kew; the twining, branched flower-stem ascended, like a Cape Asparagus, the rafters of the succulent-house for four or five feet, and as this bore no flowers, was presumed to be a branched, leafless stem proper. This died

JANUARY 1ST, 1867.



down the same year, and no one guessed the family of plants to which it belonged. In the following year a similar twining stem produced a few minute flower-buds, which were sent to my friend the late Dr. Harvey, who identified them with a plant of which he had dried specimens, collected on the eastern frontier of the Cape district by Mrs. Barber, and to which he had attached the manuscript name of *Bowiea*, in honour of the late Mr. Bowie, formerly collector for the Royal Gardens, Kew, and latterly superintendent of the late Baron Ludwig's Garden at Cape Town, the old genus *Bowiea* having been reduced to *Aloe*. Other living specimens have since been received from Mrs. Barber and from Mr. Wilson Saunders, F.R.S., collected by Cooper, and it is from one of the latter that the accompanying drawing has been made.

DESCR. Wholly green, rather fleshy. *Bulb* as large as an orange, green, the coats few, very thick, fleshy, with yellow margins. *Leaves* 0, except a few scales at the apex of the bulb. *Flowering-stem* or *scape* solitary, very slender, two to four feet long, twining, excessively branched, the branches intertwined, repeatedly dichotomously divided, the branchlets curved, divaricating, terete, without flowers. *Flowering peduncles* at the upper part of the scape, on its axis or branches, one to two inches long, slender, divaricating. *Flowers* half to two-thirds of an inch in diameter. *Perianth* six-cleft to the base; *segments* linear or lanceolate-subulate, with incurved tips. *Stamens* inserted at the base of the ovary; *filaments* slender, subulate; *anthers* oblong. *Ovary* three-celled, with several ovules in each cell; *style* short; *stigma* capitate, three-lobed. *Capsule* membranous, oblong, three-valved. *Seeds* several, flattened, with a loose, black, brilliant testa.—*J. D. H.*

---

Fig. 1. Flower. 2. Stamen. 3. Ovary. 4. Transverse section of ditto:—*all magnified.*







CURCUMA AUSTRALASICA.

*Australian Wild Turmeric.*

Nat. Ord. ZINGIBERACEÆ.—MONANDRIA MONOGYNIA.

*Gen. Char.* Calyx tubulosus, 3-dentatus. Corollæ tubus sursum dilatatus, limbi laciniaë exteriores interioribus lateralibus conformes; labellum majus, patens. Filamentum petaloideo-dilatatum, carinatum, apice 2-lobum, lobo intermedio anthera 2-calcarata terminato. Ovarium inferum, 3-loculare; stylus filiformis, stigmatе capitato; ovula in loculorum angulo centrali plurima, horizontalia, anatropa. Capsula 3-locularis, loculicide 3-valvis. Sēmina plurima, arillata.—Herbæ in India orientali tropica indigenæ, acaules, radicibus palmato-tuberosis. Folia petiolata, herbacea, petiolis vaginantibus. Scapus simplex, lateralis v. centralis. Spica erecta, carnosa, inferne bracteis saccatis subimbricata. Flores flavescentes, intra quamvis bracteam 3-5-ni, approximati, bracteolati.

CURCUMA Australasica; foliis petiolatis oblongo v. ovato-lanceolatis acuminatis glaberrimis, scapo terminali, spica multiflora, bracteis inferioribus obtusis recurvis flore brevioribus viridibus, supremis oblongis oblongo-lanceolatisve acutis acuminatisve roseis, calycis tubo corollæ dimidio brevioris, lobis brevibus rotundatis, corollæ laciniis oblongis obtusis, labello orbiculato recurvo retuso v. emarginato marginibus undulatis, anthera oblonga calcaribus conniventibus, filamento lato cucullato.

Of the extensive and beautiful Indian genus *Curcuma*, no species had been known to inhabit Australia previous to the visit of Mr. John Veitch to that continent, who was the discoverer and means of introducing the present species from its north-eastern corner (Cape York) into England. The plant here figured flowered in Messrs. Veitch's establishment in August of the last year, and the same specimen, presented by them to the Royal Gardens, continued in flower throughout the following month and beginning of October, forming a very striking ornament in one of the tropical stoves, where it lifted its beautiful crown of transparent, rose-coloured bracts above the surrounding green foliage. As a species, it approaches extremely near to two Indian ones, described by Dr. Roxburgh, viz. the common *C. longa* (Turmeric), and *C. montana*, differing from both in the cucullate bracts, with



recurved tips, and in the broader base of the leaf. The root is white, and has but a slight aroma.

DESCR. *Root* of bundles of cylindric, white tubers, constricted here and there. *Leaves* a foot to a foot and a half long, narrow-lanceolate or lanceolate, with a rounded base, acuminate. *Scape* terminal, at first short, then lengthening considerably. *Spike* five to seven inches long, cylindric, many-flowered. *Bracts*, lower cucullate, close set, and connate by their bases, obtuse, recurved, green; upper spreading, oblong, acute, rose-red, one inch long. *Flowers* pale-yellow. *Ovary* globose. *Calyx-tube* half as long as the corolla-tube; *lobes* three, obtuse. *Corolla-lobes* oblong, obtuse. *Lip* orbicular. *Anther* oblong, with conniving spurs. *Staminodes* terete—J. D. H.

---

Fig. 1. Front, and 2. Side view of flower. 3. Stamen and stigma. 4. Side view of do. 5. Side view of ovary and staminodia. 6. Front view of staminodes:—all magnified.







HELANTHEMUM OCYMOIDES.

*Basil-like Rock-rose.*

Nat. Ord. CISTINEÆ.—POLYANDRIA MONOGYNIA.

*Gen. Char.* Petala, in floribus perfectis, 5. Stamina numerosa. Ovarii placentæ v. semisepta 3; ovula in quavis placenta  $\infty$ ; stylus cum ovario articulatus, filiformis v. subclavatus, nunc abbreviatus; stigma capitatum v. cristato-3-lobum. Embryo uncinatus, 2-plicatus v. circumflexus.—Herbæ suffruticesve, basi sæpius decumbenti-ramosæ. Flores sæpius in racemos terminales, simplices v. 2-fidos dispositi v. inferiores axillares. Petala lata.

HELANTHEMUM *ocymoides*; caule suffruticoso erecto ramoso gracili, ramis incanis hic illic pilosis, foliis oppositis lineari- v. spathulato-oblongis acutis obtusisve apice recurvis utrinque incanis, pedunculis elongatis superne subcorymbosim ramosis gracilibus laxè patentim pilosis, sepalis 3 ovatis longe acuminatis pubescentibus v. tomentosis, petalis late obcordatis basi purpureis, stylo brevi, stigmate magno capitato.

HELANTHEMUM *ocymoides*. Persoon, *Ench.* v. 11. 76. DC. *Prodr.* v. 1. p. 267. Sweet *Cistin.* t. 13.

CISTUS *ocymoides*. Lam. *Dict.* v. 11. p. 18.

CISTUS *sampsucifolius*. Cavan. p. 65. t. 96, non *Milleri*.

A most beautiful hardy Rock- or Sun-rose, native of Spain and Portugal, where, like its congeners, it inhabits dry, rocky hills. It was for some years cultivated in the Royal Gardens, Kew, and flowered in July in an open border, though apt to be cut by the frost. The beautiful genus to which this belongs was once a favourite in cultivation, but has of late given way before the rage for "bedding-out plants," which now monopolize the once varied borders of English gardens. No less than seventy species of *Helianthemum*, besides varieties, are figured in Sweet's valuable work on the cultivated plants of the Order, published in 1830, and of these a great number are now no longer to be found in England. It is to be hoped that the time will yet come when the taste for really beautiful and interesting plants will



reign again, and replace the present passion for a blaze of gaudy colours along our garden walks.

DESCR. A *shrub* two to three feet high, slender, twiggy, with erect, rather flexuous branches, everywhere covered on the leaves and branches with a hoary pubescence. *Leaves* opposite, half to one and a half inch long, those on the main stems and branches linear-oblong acute, those on the branchlets more spathulate, with recurved tips, all equally hoary on both surfaces. *Peduncles* very slender, six to nine inches long, many-flowered. *Pedicels* corymbose, branched towards the tip of the peduncle, opposite below, half to one inch long, erect, as well as the peduncles covered with loose soft, very spreading hairs. *Flowers* an inch and a quarter to an inch and a half broad, bright yellow with a purple eye. *Sepals* ovate, long acuminate, subtended by two linear narrow bracts, tomentose on the back. *Petals* broadly and shallowly obcordate, with an apiculus between the lobes. *Stamens* unequal, very numerous; filaments short; anthers purple, with yellow pollen. *Ovary* globose, villous; style very short; stigma large, capitate, three-lobed.—J. D. H.

---

Fig. 1. Calyx and ovary.







GRIAS CAULIFLORA.

*Anchovy Pear.*

Nat. Ord. MYRTACEÆ.—MONADELPHIA POLYANDRIA.

*Gen. Char.* Calycis tubus turbinatus, supra ovarium haud productus, limbus cupulatus, demum in lobos 2-4 irregulariter ruptus. Petala 4, rarius 5, patentia. Stamina  $\infty$ , disco crasso subcupulato  $\infty$ -seriatim inserta, interiora minora, filamentis crassis in globum conniventibus involutis; antheræ parvæ, loculis distinctis longitudinaliter dehiscentibus. Ovarium inferum, 4-loculare; stylus 0 v. breviter conicus, stigmatibus 4 cruciatim radiantibus; ovula in loculis 2-4, pendula. Fructus carnosus, ovoideus, calycis limbo coronatus. Semen sæpius 1, pendulum, testa crassa.—Arbores excelsæ Americanæ. Folia alterna, ad apices ramulorum conferta, sæpe longissima, penninervia, integerrima v. obscure sinuato-dentata, epunctata. Flores in trunco ramisque breviter pedicellati et subsessiles, fasciculati.

GRIAS cauliflora; foliis lanceolatis acuminatis recurvis glaberrimis, pedunculis brevibus crassis multifloris, floribus pallide flavis, petalis oblongis obtusis.

GRIAS cauliflora. Linn. Sp. Pl. 732. DC. Prodr. v. 3. p. 296. Griseb. Fl. Brit. W. Ind. p. 243.

Anchovy Pear. Sloane Hist. Jam. v. 2, p. 122. t. 217. f. 1, 2. Browne, Jam. p. 245. Lunan, Hort. Jam. v. 1. p. 19.

This is a plant of considerable interest, in a horticultural and perhaps also in an economic point of view. In the first place, it is one of the most striking and easily managed of all those stately, palm-like tropical dicotyledonous trees that are so greatly admired, and are essential for the decoration of every stove; and in the next place, as the "Anchovy Pear," it has long been, according to some authorities, in esteem as a West Indian fruit. The latter is a large, brown, fleshy drupe, like that of the Mammee-apple, which was, according to Sloane, pickled and eaten by the Spaniards in lieu of mangoes, and was sent as a great rarity to Spain. Browne, in his 'Natural History of Jamaica,' says nothing of the value of the fruit, but M'Fadyen, who represents the English taste



in such matters, says in his second volume (unpublished), "I cannot learn that the fruit is ever collected for use, or brought to the market."

The *Grias cauliflora* is found throughout the Spanish Main, growing in clumps or thickets, and its flowers are deliciously sweet-scented. It has flowered several times at Kew, and lately in September of last year.

DESCR. A *tree* twenty to fifty feet high, trunk undivided or with a few simple branches. *Leaves* crowded at the ends of the branches, spreading and drooping, three to four feet long, ten inches broad, obovate-lanceolate, acuminate, cuneate at the base and continuous with the short petiole, quite entire or obscurely waved and crenulate, dark green, quite glabrous, shining. *Flowers* on short stout branching peduncles, produced on the trunk far below the leaves, two inches broad, pale yellow, very fragrant. *Calyx* limb irregularly four-cleft. *Petals* four, fleshy, oblong, obtuse, nerveless. *Stamens* crowded, incurved. *Apex* of *ovary* square and red. *Fruit* ovate, eight-grooved, containing an oblong, one-seeded nut.—J. D. H.

---

Fig. 1. Whole plant, *reduced*. 2. Branch and flower, *nat. size*. 3. Ovary and calyx. 4. Transverse section of ditto. 5. Vertical section of stamen. 6. Stamen:—*all magnified*.



# GROOM'S SUPERB NEW ZONATE GERANIUMS.

(See Descriptive Circular.)

A faithful Illustration by Andrews of the Set may be had for Thirteen Postage Stamps.

Robert Ward, The Rosery, Ipswich.

## NEW ENGLISH HYBRID PERPETUAL ROSES, MRS. WARD, MRS. JOHN BERNERS, AND IPSWICH GEM.

ROBERT WARD has the pleasure to announce that he is now taking Orders for the above splendid Seedlings, which will be let out next spring, and that these truly beautiful varieties will prove equally satisfactory with his celebrated 'John Hopper.'

*A Descriptive Circular may be had on application.*

Coloured Plates by Andrews of 'Mrs. Ward' and 'Mrs. Berners,' post-free for 24 Stamps.

ROBERT WARD, THE ROSERY, IPSWICH.

## HYACINTHS, TULIPS, AND OTHER DUTCH BULBS,

IMPORTED BY

WM. CUTBUSH AND SON.

The DESCRIPTIVE PRICED CATALOGUE, with numerous cultural remarks, Post-free on application.

Early Orders earnestly solicited, as the supply cannot possibly meet the increasing demand.

HIGHGATE NURSERIES, LONDON, N.



## SUTTON'S UNRIVALLED COLLECTIONS OF SEEDS.

### SUTTON AND SONS

ARE NOW PREPARED TO RECEIVE ORDERS FOR THE ABOVE,  
THE PRICES OF WHICH ARE AS FOLLOWS:—



#### FOR THE KITCHEN GARDEN.

	£.	s.	d.
No. 1. A complete Collection for one year's supply	3	3	0
No. 2. A complete Collection of ditto, quantities proportionately reduced	2	2	0
No. 3. A complete Collection of ditto	1	11	6
No. 4. A complete Collection of ditto	1	1	0
No. 5. A complete Collection of ditto	0	15	0
No. 6. A complete Collection of ditto	0	10	6

*Nos. 1, 2, 3, 4, 5, free by Rail.*

#### FOR THE FLOWER GARDEN.

	£.	s.	d.
No. 1. A complete Collection of the newest and most approved German and English varieties	2	2	0
No. 2. A complete Collection of ditto	1	11	6
No. 3. A complete Collection of ditto	1	1	0
No. 4. A complete Collection of ditto	0	15	0
No. 5. A complete Collection of ditto	0	10	6

*Free by Post or Rail.*

### SUTTON'S RINGLEADER PEA,

The very best and earliest in cultivation, Price 2s. per Quart.

### SUTTON'S SPRING CATALOGUE AND AMATEUR'S GUIDE FOR 1867

Will shortly be ready, and forwarded on receipt of 12 stamps; gratis to customers.

*All Goods sent Carriage Free (except small parcels). 5 per cent. discount allowed for cash payment.*

SUTTON & SONS, ROYAL BERKSHIRE SEED ESTABLISHMENT, READING.



# HEATING BY HOT WATER.

---

It is now generally admitted that Buildings of any kind can be more effectually warmed by Hot Water than by any other means; but as so much depends on the way in which the Apparatus is fixed, it is of the greatest importance that it be done by experienced men.

J. JONES & SONS are prepared to estimate for Warming, to any extent—

GREENHOUSES.  
CONSERVATORIES.  
VINERIES.  
HOTHOUSES.  
FORCING PITS.  
PEACH HOUSES.  
PINE STOVES.  
ORCHARD HOUSES.

CHURCHES.  
CHAPELS.  
SCHOOLS.  
READING ROOMS.  
LECTURE ROOMS.  
BILLIARD ROOMS.  
HALLS AND PASSAGES.  
BATHS.

FACTORIES.  
OFFICES.  
WORKSHOPS.  
WAREHOUSES.  
DRYING ROOMS.  
CELLARS.  
COACH-HOUSES.  
HARNESS ROOMS.

J. JONES & SONS' Apparatus is simple in construction, moderate in cost, and economical in working.

It is equally available for the Amateur's Greenhouse, or the longest range of Forcing Houses; for the smallest Chapel or the largest Church; for Private Offices or those of Public Companies.

It is admirably adapted for Dwelling Houses, as coils of pipes can be placed in any part, for warming the various rooms. One or more Baths may be heated from the same boiler, and a constant supply of hot water obtained in any part of the house.

For Warehouses and Workshops this system of heating is unsurpassed, as it is not only the means of keeping goods dry, but it also adds to the comfort of the workpeople, and thereby effects a saving in labour.

J. JONES & SONS recommend boilers of all kinds being set in brickwork, if possible; but portable boilers can be supplied, if required.

---

**MATERIALS.**—All Materials supplied will be of the best quality.

**DELIVERY.**—Boilers of various kinds, and pipes and connections, being always in stock, can, at a very short notice, be sent to any part.

**FIXING.**—The Fixing will be done by experienced men, fully capable of finishing properly any work they may undertake; and J. JONES & SONS are prepared to guarantee the effectual working of any apparatus fixed by their own men.

**ESTIMATES.**—Plans and Estimates will be sent on application.

---

**J. JONES & SONS,**  
**IRON MERCHANTS AND HORTICULTURAL ENGINEERS**  
6, BANKSIDE, SOUTHWARK, LONDON, S.E.



Third Series.

No. 266.

VOL. XXIII. FEBRUARY.

[Price 3s. 6d. col<sup>d</sup>. 2s. 6d. plain.]

OR No. 961 OF THE ENTIRE WORK.

CURTIS'S  
BOTANICAL MAGAZINE,

COMPRISING

THE PLANTS OF THE ROYAL GARDENS OF KEW,  
AND OF OTHER BOTANICAL ESTABLISHMENTS IN GREAT BRITAIN,  
WITH SUITABLE DESCRIPTIONS;

BY

JOSEPH DALTON HOOKER, M.D., F.R.S. L.S. & G.S.,

Director of the Royal Botanic Gardens of Kew.



~~~~~  
Nature and Art to adorn the page combine,  
And flowers exotic grace our northern clime.  
~~~~~

LONDON:

REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

1867.



# SHANKS' NEW PATENT LAWN MOWERS FOR 1867

*Patronized on Five occasions, during the Season of 1864, by*

HER MAJESTY THE QUEEN,

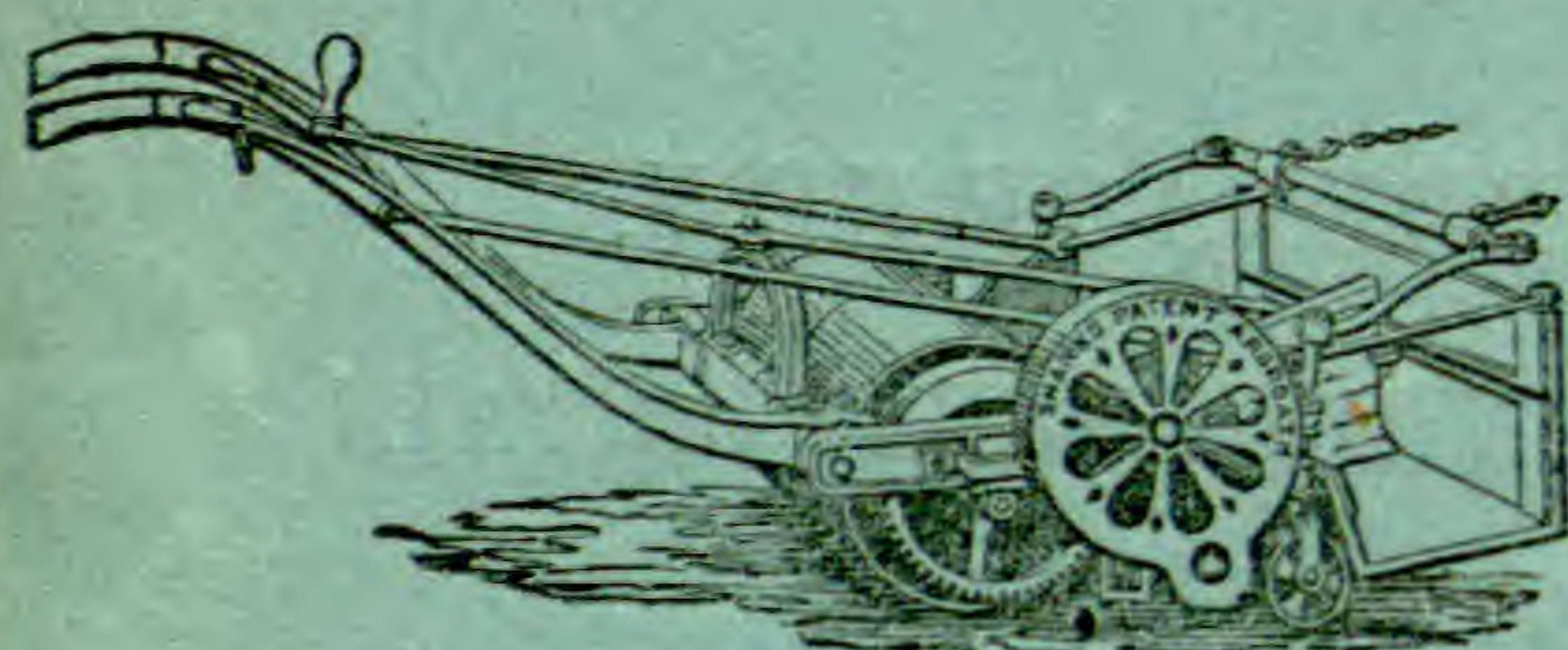
AND ONCE BY HIS MAJESTY THE KING OF SAXONY;

DURING THE SEASON OF 1865 THEY WERE PATRONIZED ON FOUR OCCASIONS BY HER MAJESTY THE QUEEN;

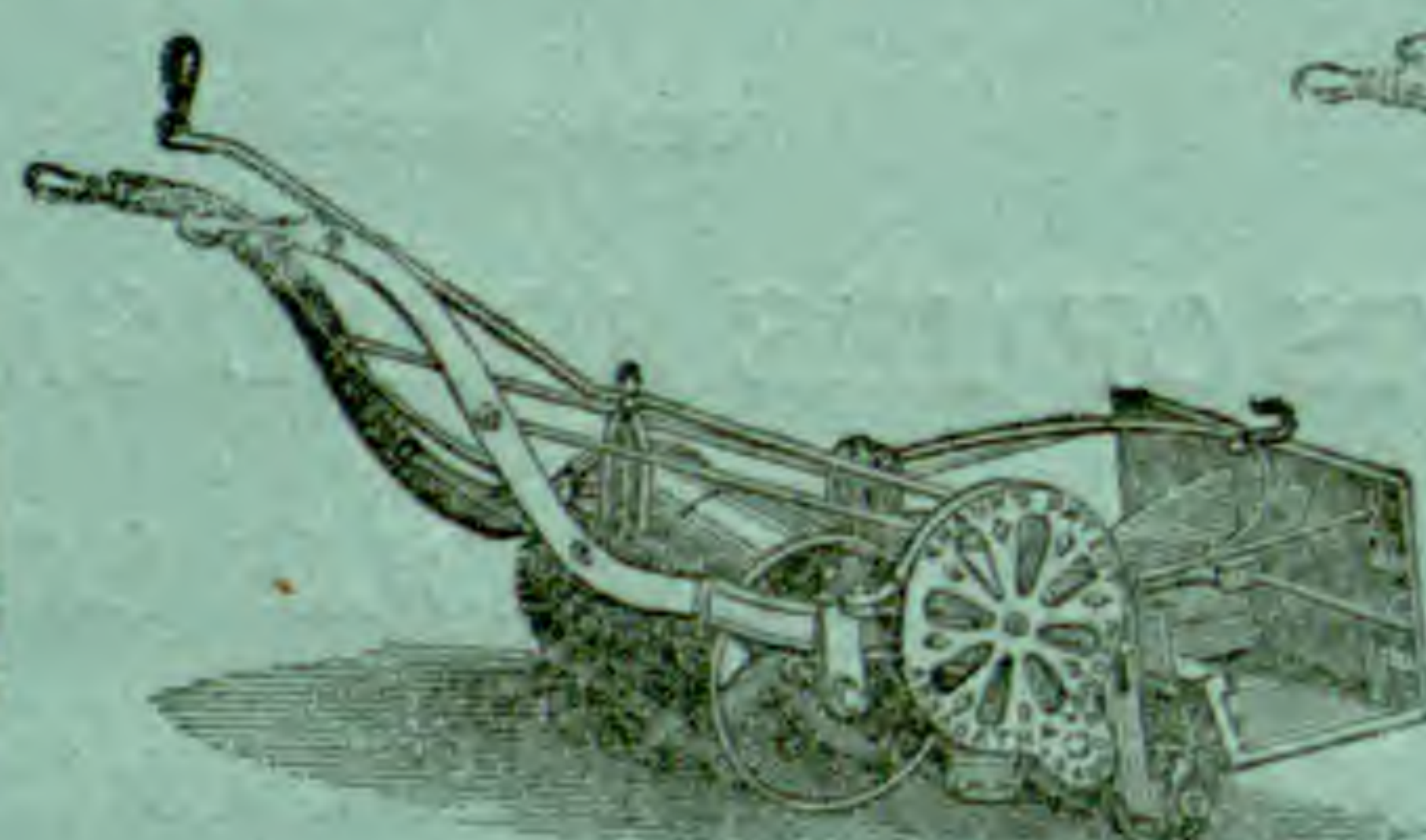
ONCE BY HIS MAJESTY THE KING OF HOLLAND;

AND ONCE BY HIS MAJESTY THE KING OF PRUSSIA;

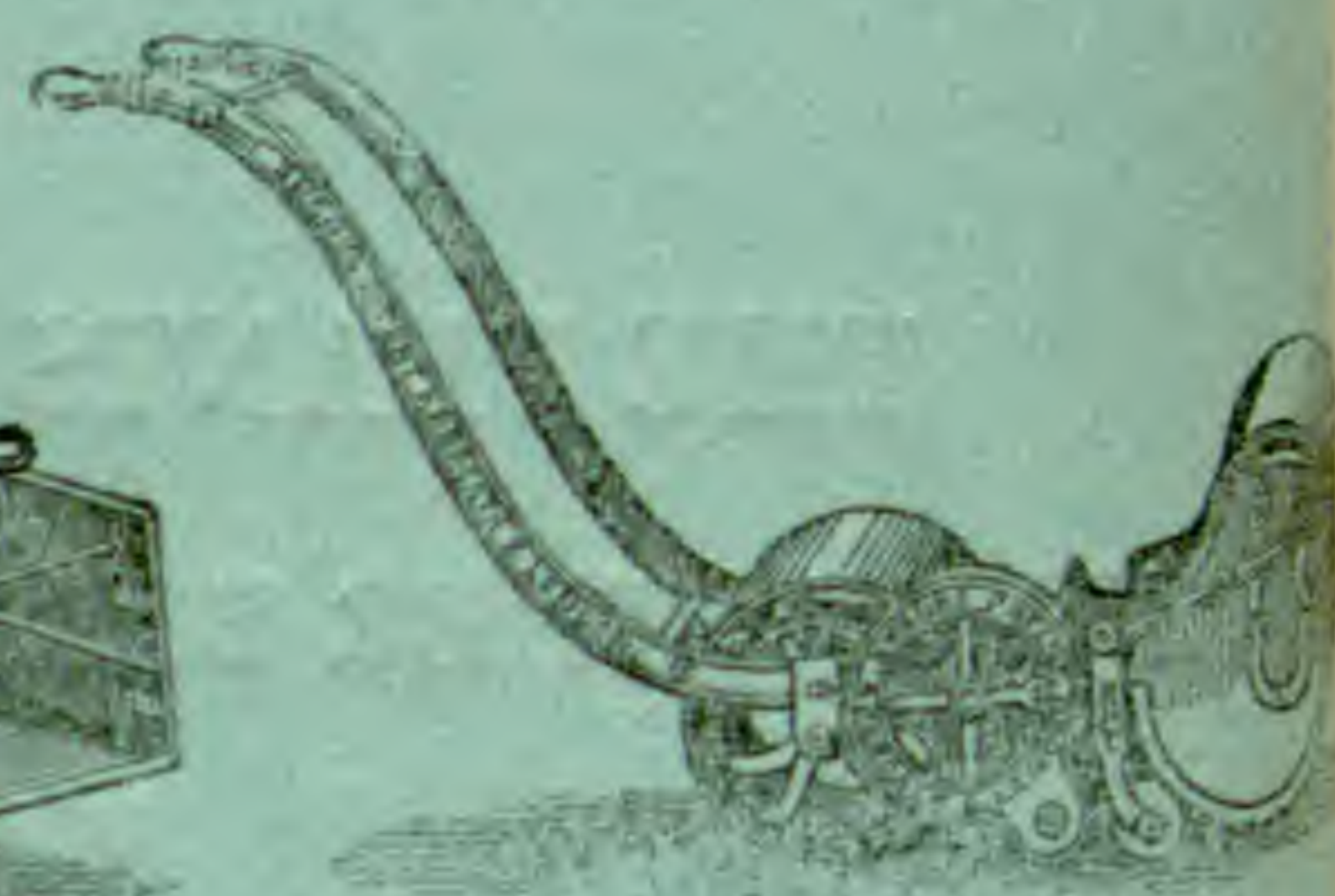
AGAIN, DURING THE SEASON OF 1866, THEY WERE PATRONIZED ON FOUR OCCASIONS BY HER MAJESTY THE QUEEN.



HORSE MACHINE.



PONY MACHINE.



HAND MACHINE.

ALEXANDER SHANKS & SON, in presenting their LAWN MOWERS for the Season of 1867, are gratified to be able to state that the demand for their celebrated Machines rapidly increases every year. The success attended SHANKS' Machines during last Season is quite unparalleled in the history of the Lawn Mower.

A. S. & SON can confidently assure their numerous Friends and Customers and the Public generally that their endeavour will always be to supply a Machine, first-class in every way, one which cannot be surpassed if even equalled in whether for simplicity of construction, ease in working, or durability. None but the best materials and skilled workmen are employed in the manufacture of their Machines.

**PRICES**—Including Carriage to most of the principal Railway Stations and Shipping Ports in the Kingdom.

## SHANKS' NEW PATENT HAND MACHINE FOR 1867.

10-inch Machine.....£3 10 0	} Easily worked by a Lady. Do. by a Boy. Do. by a Man.	19-inch Machine.....£7 12 6	{ Do. by a Boy and a Man. Do. by a Boy and a Man. Do. by a Boy and a Man.
12-inch Machine.....4 10 0		22-inch Machine.....8 7 6	
14-inch Machine.....5 10 0		24-inch Machine.....8 17 6	
16-inch Machine.....6 10 0			

Silent Movement for the four smallest sizes, 4s. extra; for the other sizes, 7s. 6d. extra.

## SHANKS' NEW PATENT PONY & DONKEY MACHINE.

Width of Cutter.	If with Patent Delivering Apparatus.	
25-inch Machine.....£12 10 0	25s. extra.	
28-inch Machine.....14 10 0	30s. extra.	
30-inch Machine.....15 15 0	30s. extra.	

Silent Movement, 12s. 6d. extra.

## SHANKS' NEW PATENT HORSE MACHINE.

Width of Cutter.	If with Patent Delivering Apparatus.	
30-inch Machine.....£19 0 0	30s. extra.	
36-inch Machine.....22 0 0	30s. extra.	
42-inch Machine.....26 0 0	40s. extra.	
48-inch Machine.....28 0 0	40s. extra.	

Silent Movement, 20s. extra.

SHANKS' PATENT LAWN MOWERS cut the Grass on uneven as well as on level Lawns; and it is immaterial whether the Grass be wet or dry.

*Every Machine warranted to give ample satisfaction, and if not approved of, can be at once returned.*

ALEXANDER SHANKS & SON,

27, LEADENHALL STREET, LONDON.

MANUFACTORY, DENS IRONWORKS, ARBROATH.

A. S. and SON keep a Stock of Lawn Mowers at 27, Leadenhall Street, London, from which Orders can be at once executed. They also have at their London Warehouse a staff of experienced Workmen thoroughly acquainted with all the details of these Machines, so that they are enabled to repair Lawn Mowers in London as well as at the Manufactory.



# BOTANICAL MAGAZINE ADVERTISER.

## GENUINE GARDEN SEEDS.

### NUNEHAM PARK ONION.

WILLIAM CUTBUSH AND SON have great gratification in announcing that this SUPERB NEW ONION has in every instance where shown obtained the first prizes. It is the largest and heaviest cropper of all Onions, mild and long keeping.

*In Sealed Packets, 2s. 6d. Each.*

WM. C. & SON'S Catalogue of Vegetable, Flower, and Farm Seeds, post free on application.

### VARIEGATED PELARGONIUM "METEOR," SALTMARSH AND SON'S.

This beautiful variety, to which a First-Class Certificate was awarded at a meeting of the Royal Horticultural Society, will be sent out on the 1st of May, 1867, with a few others by the same raisers, at 21s. each. The usual discount to the Trade. Orders will be executed in strict rotation. Further particulars will appear in future advertisements.

SALTMARSH AND SON, MOULSHAM NURSERIES, CHELMSFORD.

## GENUINE SEEDS.

### JAMES VEITCH AND SONS

BEG TO ANNOUNCE THAT THEIR

CATALOGUE OF KITCHEN GARDEN AND FLOWER SEEDS FOR 1867,  
WITH LIST OF IMPLEMENTS AND OTHER GARDEN REQUISITES,

Is now Published, and will be forwarded free on application.

THE ROYAL EXOTIC NURSERY, KING'S ROAD, CHELSEA, LONDON, S.W.

For Conservatories, Greenhouses, Orchard-Houses, and Pits,

Where Bedding Plants are kept during the Winter, the Best and Cheapest Means to repel the Frost is

### HAYS'S PATENT CONSTANT STOVE

Which requires no Flue, is Cleanly, Portable, and Economical, requires attention only once in twelve hours, ensures a regular and constant heat at a trifling cost, and fully supplies a want long felt by every class of gardener.

Price 30s., 60s., and 80s. each. The Patent Fuel supplied in Bags containing two bushels, price 1s. 10d. per bushel. Bags charged 9d. each, and allowed for if returned.

These Stoves are also eminently adapted for Churches, Halls, Hospitals, Offices, Shops, Wine Cellars, Coach Houses, Harness Rooms, etc., etc., and can be made on the same principle to any size or design.

Particulars, Testimonials, and Reports from Professor Pepper, Mr. Thomas Rivers, and other reliable authorities, free, from

HENRY BAKER, 17, HARP LANE, GT. TOWER STREET, LONDON,

Sole Agent for Stoves and Fuel.

*Now ready, Royal 4to, with 10 coloured Plates, 10s. 6d., Part VI. of*

## A SECOND CENTURY OF ORCHIDACEOUS PLANTS,

Selected from the subjects published in Curtis's 'Botanical Magazine' since the issue of the 'First Century.'

Edited by JAMES BATEMAN, Esq., F.R.S.

To be completed in Ten Parts. Part VII. will be published April 1st.

REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.



# BARR AND SUGDEN'S GUIDE

TO THE KITCHEN AND FLOWER GARDEN FOR 1867.

IT EMBRACES EVERY NOVELTY AND SPECIALITY WORTHY OF NOTICE IN  
**FLOWER AND VEGETABLE SEEDS.**

## INTENDING PURCHASERS

WILL BE PRESENTED WITH COPIES ON SENDING THEIR ADDRESSES.

### COLLECTIONS OF VEGETABLE SEEDS

Sent Carriage Paid.

21/., 30/., 42/., 63/., 84/., 105/., to 210/.

Smaller Collections made up if required.

### COLLECTIONS OF FLOWER SEEDS

Sent Post Paid.

3/6, 5/6, 7/6, 10/6, 15/., 21/., 42/., 63/., 84/.,

105/., to 210/.

*For full particulars of these Collections see the Guide.*

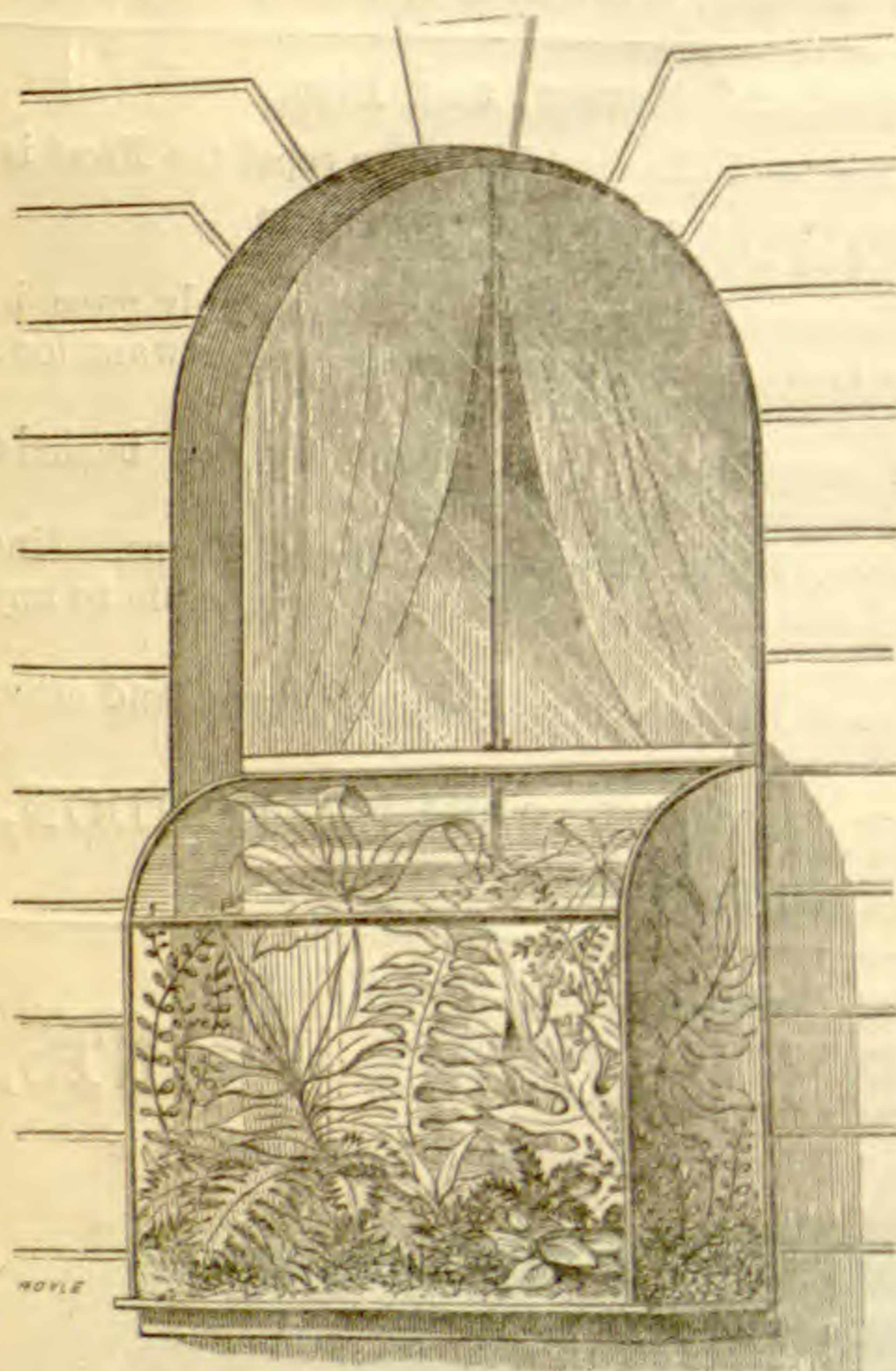
## BARR & SUGDEN'S WINDOW CONSERVATORIES & WINDOW FERNERIES

OF VARIOUS STYLES.

The present Illustrations are part of a series which B. & S. have fitted up. The introduction of these elegant structures is a great boon, especially in large towns. Window Conservatories (as Illustrated) being constructed generally in the front of the house, give increased elegance to the façade, and contribute to the retirement of the interior. Plants in bloom may be conserved in these for a longer period than if they were exposed to the drier atmosphere of the room, or ferns may be successfully grown in them; indeed they may be made an interesting source of recreation throughout the year.

Window Ferneries, which can be constructed with or without an Aquarium and Fountain, and are used principally on defectively lighted staircases, or to replace windows that have stained glass. They are also used in rooms where the prospect is objectionable; and as they abut some little distance outwardly, in addition to the refreshing nature of the green foliage, and abating no whit of the light, they give an enlarged appearance to the apartment.

WINDOW CONSERVATORY.



WINDOW FERNERY.



BARR AND SUGDEN, 12, KING STREET, COVENT GARDEN, W.C.







TAPEINOTES CAROLINÆ.

*Empress Charlotte's Tapeinotes.*

Nat. Ord. GESNERIACEÆ.—DIDYNAMIA ANGIOSPERMIA.

*Gen. Char.* Calyx liber, inæqualis, 5-partitus. Corolla infundibuliformi-subringens, basi postice gibba, tubo antice interdum grosse ventricosus, fauce contracto, limbi erecti, labio superiore 2- inferiore 3-lobus. Stamina 4, didynama, et quinti rudimentum; antheræ cohærentes. Discus in glandulam posticam tumens. Capsula ovata, coriacea, 1-locularis, 2-valvis, placentis 2 parietalibus 2-lamellatis. Semina ∞, oblonga.—Herbæ Brasilienses, subcarnosæ, caule basi tuberoso. Folia opposita v. subopposita, petiolata, subdentata. Pedicelli 1-2-axillares, 1-2-flori.

TAPEINOTES *Carolinæ*; suffruticosa, foliis confertis oblongis oblongo-lanceolatisve acuminatis basi acutis crenato-serratis supra nitidis luride virescentibus subtus hirtis rubro-purpureis, pedicellis angulatis 1-floris infra calycem 5-alatis, sepalis foliaceis deltoideo-cordatis acutis marginibus recurvis undulatis, corolla alba calyce duplo longiore, tubo inflato hirsuto, lobis parvis suborbiculatis glabris, ovario hirsuto.

TAPEINOTES *Carolinæ*. Wawra, *Æstr. Bot. Zeitschrift*, 1862, p. 273, cum ic.; *Bot. Ergebn. Reise Maximil.* p. 72. t. 9.

A beautiful stove plant, introduced into this country by Mr. Bull, of Chelsea, from whose plant the accompanying drawing was made, in November, 1866. It was discovered during the Brazilian travels of his present Majesty the Emperor of Mexico (Maximilian I.) in 1859-60, and was introduced into the Imperial Garden of Schönbrunn (Vienna) and published by Dr. Henrich Wawra, who accompanied the expedition as surgeon and naturalist. It bears the name of the Empress of Mexico (Charlotte).

The other species of *Tapeinotes*, of which there are several, are all natives of Brazil and well worthy of cultivation, as indeed are most of the plants of the beautiful Order to which it belongs.

DESCR. A small undershrub. Stem and branches terete, red-brown, rather succulent. Leaves crowded towards the



ends of the branches, opposite, four to six inches long, shortly petioled, oblong-lanceolate, acuminate, obtusely serrate, dark bluish-green and shining above, with sunk veins and scattered short hairs, bright red-purple and hairy below. *Peduncles* axillary, solitary, one-third as long as the leaves, angular, one-flowered, with two subulate bracts at the base. Calyx of five, large, leafy, triangular, cordate, acute, green sepals, with undulate, recurved margins. *Corolla* an inch and a half long, white; *tube* curved upwards, inflated and gibbous below, villous with long hairs; *mouth* contracted; *lobes* short, broad, rounded, glabrous. *Stamens* included; *anthers* cohering. *Ovary* villous.—J. D. H.

---

Fig. 1. Base of calyx and ovary :—*magnified*.







ANGRÆCUM CITRATUM.

*Citron-yellow Angræcum.*

Nat. Ord. ORCHIDÆÆ.—GYNANDRIA MONANDRIA.

*Gen. Char. (Vide supra, TAB. 5589.)*

ANGRÆCUM *citratum*; subaaulis, foliis confertis oblongo-lanceolatis acuminatis convexiusculis, scapo gracili pendulo, bracteis appressis obtusis nigris, floribus inter minores racemosis breviter pedicellatis pallide stramineo-albis, pedicellis teretiusculis, sepalis lateralibus obovato-spathulatis obtusis, dorsali multo minore arcuato porrecto, petalis sepalis majoribus breviter unguiculatis obovato-rotundatis, labello late unguiculato, lamina orbiculari emarginato-2-lobo, calcare labello duplo longiore flexuoso.

ANGRÆCUM *citratum*. *Pet. Thouars, Hist. Partic. Plant. Orchid. recueillies sur les trois îles d'Afrique, t. 61.*

A very curious and pretty little species, of which I find no record subsequent to the publication of Du Petit Thouars' work, cited above, and which was published in 1822, for, strange to say, it is omitted in Lindley's celebrated 'Genera and Species of Orchidaceous Plants.' The structure of the flower seems peculiar, owing to the small size of the dorsal sepal, as shown both in 'Thouars' and Mr. Fitch's drawings. I regret not having seen the living specimen, to confirm this character. The name is given in reference to the pale yellow (citron-coloured) flowers, which are scentless. The plant is a native of Madagascar, and was flowered by Messrs. Veitch, of the Royal Exotic Nurseries, Chelsea, in March, 1865.

DESCR. *Stem* very short, half an inch long, sending out abundance of slender flattened aerial roots. *Leaves* few, close-set, three to four inches long, oblong-lanceolate, acuminate, contracted at the base, smooth, convex, and bright green above, paler below; midrib deeply sunk. *Scape* radical, with the flowering portion twice as long as the leaves, pendulous, very slender, with numerous short, sheathing,



appressed, obtuse, black bracts. *Raceme* three to five inches long, slender, many-flowered. *Flowers* rather close-set, shortly pedicelled, three-quarters of an inch diameter, flat, pale straw-colour. Lateral *sepals* obovate-spathulate, obtuse, rather reflexed; dorsal very much smaller, arched over the column. *Petals* a little larger and much broader than the lateral sepals, orbicular, obovate, with short claws. *Lip* with an orbicular, emarginate, or two-lobed flat blade, and short broad claw. *Spur* about twice as long as the lip, flexuous, rather slender.  
—J. D. H.

---

Fig. 1. Portion of raceme and flower. 2. Column, lip and spur. 3. Pollen-masses, spur and gland:—*all magnified.*







IMPATIENS LATIFOLIA.

*Broad-leaved Cingalese Balsam.*

Nat. Ord. BALSAMINEÆ.—PENTANDRIA MONOGYNIA.

*Gen. Char.* Flores irregulares, *Sepala* 3, rarissime 5, imbricata, 2 lateralalia parva, sæpius viridia; *posticum* maximum, in calcar productum. *Petalala* 3, anticum exterius concavum, lateralalia 2-fida (e 2 coalitis composita); *lobo* superiore exteriori. *Stamina* 5, filamentis brevibus complanatis; *antheræ* circa stylum conniventes v. cohærentes, loculis introrsum dehiscentibus. *Ovarium* oblongum, 5-loculare; *stigma* sessile, 5-dentatum, v. stigmata 5, parva; *ovula* in loculis  $\infty$ , superposita, 1-seriata. *Capsula* 2-5-locularis, loculicide dehiscens; *valvis* 5, elastice desilientibus. *Semina* exalbuminosa.—*Herbæ nunc frutescentes, sæpius glabræ. Folia opposita alterna v. verticillata, exstipulata. Pedunculi axillares, rarius radicales, 1- $\infty$ -flori. Flores sæpe speciosi.*

IMPATIENS *latifolia*; erecta, glaberrima, foliis alternis rarius oppositis verticillatisve ovato-lanceolatis attenuato-acuminatis basi acutis argute serratis dentibus inferioribus setiferis, petiolo longe setoso, setis glanduliferis, pedicellis axillaribus solitariis 1-floris ebracteolatis, floribus majusculis pallide purpureis, sepalis lateralibus oblique oblongo-lanceolatis viridibus, labelli limbo concavo viridi, calcare gracili curvo, vexillo obcordato-2-lobo dorso cornuto, alis 2-partitis horizontaliter patentibus.

IMPATIENS *latifolia*. *Linn. Sp. Pl.* 1238. *Hook. f. and Thoms. in Journ. Linn. Soc.* iv. p. 124.

IMPATIENS *cuspidata*. *Wight and Arn. in Hook. Comp. Bot. Mag.* v. 1. p. 321. *Wight, Ic. t.* 741. *Thwaites, Enum. Pl. Ceylon,* p. 65.

IMPATIENS *bipartita*. *Arn. in Hook. Comp. Bot. Mag. l. c.* p. 322.

IMPATIENS *floribunda*. *Wight in Madr. Journ. Sc.* v. 5. p. 7.

Of the vast horde of Indian perennial Balsams, only two or three are actually in cultivation, whilst nearly a hundred, most of them highly ornamental, are yet to be introduced, and especially from the subtropical jungles of Ceylon, the western Ghauts, and the Himalaya. Amongst those of the first-named locality the present is a conspicuous instance, which we owe to our indefatigable correspondent G. H. K. Thwaites, F.R.S., who sent seeds from the Royal Gardens,

FEBRUARY 1ST, 1867.



Peradenia, in the winter of 1865, plants from which flowered, in moderate heat, at Kew, in September, 1866. It belongs to a most puzzling group of this genus, in which the leaves are sometimes opposite or whorled, but more often alternate, and is most closely allied to, if not identical with, the *I. flaccida* of this work, Tab. 5276, differing chiefly in the broader leaves. Thwaites, indeed, refers *I. flaccida* to the Linnæan *I. latifolia*, but describes it as a decumbent plant, which does not accord with the habit of the original specimen in the Linnæan herbarium. Unfortunately the locality of the Linnæan specimen is unknown; it is marked as from the Cape of Good Hope, obviously erroneously, and has the spur bifid at the apex (an abnormal feature). Lastly, *I. flaccida*, according to Thwaites, is a lowland plant, ascending to an elevation of 3000 feet; whereas the present is a mountain species, occurring between 4000 and 7000 feet. It is also a native of the ghauts of Western India.

DESCR. A shrub, two to four feet high, much branched, quite glabrous. *Stems* terete, rather swollen at the joints. *Leaves* usually alternate, sometimes, especially in peninsular Indian specimens, opposite or whorled, petioled, very variable in size and shape, two to four inches long, ovate or ovate-lanceolate, acuminate, sharply serrate, lower serratures setigerous, as is the petiole. *Flowers* in solitary, one-flowered, axillary peduncles, one to two inches long, flat, an inch to an inch and three-quarters in diameter, pale purple. *Lateral sepals* small, green, oblong-lanceolate. *Lip* concave, green, with a long, slender spur. *Upper petal* deeply two-lobed, with a green horned keel at the back. *Wings* spreading, upper lobe largest, emarginate, all obtuse.—*J. D. H.*

---

Fig. 1. Upper limb of ovary :—*magnified*.







CLAVIJA FULGENS.

*Brilliant-flowered Clavija.*

Nat. Ord. MYRSINÆ.—PENTANDRIA MONOGYNIA.

*Gen. Char.* Calyx profunde 5-fidus, laciniis obtusis imbricatis. Corollæ tubus brevis; lobi 5, fauce in appendices 5 carnosas cum lobis alternantes tumente. Stamina 5, filamentis brevissimis liberis v. connatis; antheræ extrorsum dehiscentes, sæpe in capitulum conniventes. Ovarium 1-loculare; stylus brevissimus, stigmate brevi 2-lobo; ovula pauca placentæ parvæ basilarî inserta. Bacca globosa, oligosperma. Semina placentæ globosæ affixa, umbilico ventrali, testa mucilaginosa, albumine corneo; embryo excentricus, cotyledonibus ovatis planis, radícula infera.—Frutices Americæ tropicæ; caule simplici, apice folioso. Folia alterna, coriacea. Racemi axillares. Flores inter minores, abortu unisexuales, albi flavi v. aurantiaci.

CLAVIJA *fulgens*; foliis breviter petiolatis, elongato-obovato-lanceolatis obtusis v. subacutis supra medium remote dentatis, costa valida, nervis inconspicuis, racemis erectis robustis multi-densifloris, floribus majusculis erecto-patentibus rubro-aurantiacis, pedicellis brevibus crassis, calycis lobis ciliolatis, corollæ lobis orbiculatis, glandulis subrotundis, filamentis liberis, antheris subquadratis flavis, connectivo crasso.

The beautiful plant here figured, and which flowered in the Royal Gardens in September of last year, is stated to have been received about eighteen years ago, but I can find no record of either its native country or donor, except that it may possibly have been raised from seeds sent from Lima, in Peru, by the late Mr. M'Lean, an old correspondent of the Gardens. Its congeners, of which a dozen or so are well described, are all South American, extending from Brazil to Panama, and down the Andes on the west coast to Peru, but amongst them all I find none, either in our herbarium or books, that equals this for the size and colour of its flowers. As a stove plant it is easily managed, flowers freely, and having the habit of the genus in foliage, etc., it forms a very strikingly ornamental plant.

DESCR. *Trunk* erect, in our plant about four feet high, very

FEBRUARY 1ST, 1867.



stout, three-quarters of an inch in diameter, with scattered subulate scales towards the top. *Leaves* ten to fourteen inches long, three to five inches broad, very narrowly obcuneate-spathulate, obtuse or subacute, narrowed into the very short stout petiole, remotely toothed towards the apex, dark-green, very coriaceous; *nerves* obscure; *midrib* very stout. *Racemes* erect, four to five inches long, an inch and a half in diameter, rachis entirely hidden by the densely crowded flowers. *Pediceles* very short, stout, glabrous. *Base of calyx* turbinate; *lobes* orbicular, minutely ciliated. *Corolla* half an inch to two-thirds of an inch in diameter, deep orange-red, yellow in the disk; *lobes* rounded, with very tumid subhemispherical glands. *Stamens* small, sunk between the glands of the petals; *filaments* short, stout, free; *anthers* subquadrate; *cells* recurved at the base on the very thick, subquadrate, swollen connective. *Ovary* with a short conic style and capitate stigma.—*J. D. H.*

---

Fig. 1. Flower. 2. Calyx and ovary. 3 and 4. Stamens:—*all magnified.*







MESOSPINIDIUM SANGUINEUM.

*Rosy Mesospinidium.*

Nat. Ord. ORCHIDÆ.—GYNANDRIA MONANDRIA.

*Gen. Char.* *Perigonium* subcarnosum, clausum. *Sepalum* summum lanceolatum; *sepala* lateralibus connata, apice bifida, laciniâ utraq̃ue lanceâ, basi subsaccato labello suppositâ; *petala* triangulo-lanceolata, acuta, sepalis basi vix imbricantibus. *Labellum* cuneatum, obcordatum, limbo revolutum, carinæ duæ, unguem marginantes, eboracæ, nunc antice lobatæ canalem velutinum inter se linquentes, lamellâ bilobâ depressâ antepositâ, subimmobile. *Columna* semiteres, anticè profunde excavatum. *Androclinii* limbus utrinque dependens; rostellum ascendens, acuto-triangulum, bicuspidatum. *Anthera* unilocularis, anticè retusa, medio cuspidata. *Pollinia* globosa, posticè minutè perforata. *Caudicula* linearis, basi latior; glandula lancea. *Character ex* *Rchb. Walp. Annales*, v. p. 6.

MESOSPINIDIUM *sanguineum*; pseudobulbis ovalibus compressis nebulosis diphyllis, foliis cuneato-ligulatis acutis, racemis secundis, ramosis foliis longioribus, bracteis squamæformibus minutis, sepalis oblongis acutis, lateralibus medium versus bifidis, sepalis cuneato-ovato-acutis, labello lingulato acuto, lateribus erectis, carinâ lineari per disci basin superiorem apice sc. medio labello divergenti biseri, androclinio minute lobulato.

MESOSPINIDIUM *sanguineum*. *Rchb. fil. Walp. Annales*, l. c.

A very pretty plant, with nodding racemes in the way of those of *Rodriguesia secunda*, but larger and handsomer. Unlike the latter species, which is found abundantly at the embouchure of the Amazon river, and which therefore luxuriates in a great degree of heat and moisture—this *Mesospinidium* is met with at a great elevation, and consequently in a cool climate, among the Peruvian and Quitensian Andes, whence descend some of the largest tributaries of that most magnificent of all streams. Although discovered by Jameson more than twenty years ago, and subsequently met with by Warscewicz, it does not appear to have ever reached this country alive before the year 1866, when plants of it were received in excellent condition from Ecuador, by the Messrs.

FEBRUARY 1ST, 1867.



Backhouse, of York, who exhibited a flowering specimen of it—from which the Plate was derived—at one of the Tuesday meetings at South Kensington in November last. It appears quite at home in what may conveniently be termed the “Peruvian house,” as meant to include the coolest and dampest section of temperate Orchids, while the “Mexican house” would indicate a climate somewhat warmer and drier than the last, but still cool.

As a genus, *Mesospinidium* comes near to *Odontoglossum*, from which a superficial observer might fail to distinguish it. Professor Reichenbach—the founder of the genus—would also make it embrace the genera ‘Ada’ and ‘Abola’ of Lindley, a view in which I find myself at present unable to concur.

DESCR. An epiphyte, with compressed, prettily-mottled oval two-leaved *pseudobulbs*. *Leaves* ligulate, sharp-pointed, shorter than the many-flowered drooping slightly-branched *flower-stem*. *Bracts* minute, scale-like. *Sepals* oblong, acute, the side ones joined at the base—for more than half their length. *Petals* cuneate, ovate, acute, of a firm waxy substance, and (like the sepals) of a uniform warm rosy tint. *Lip* lingulate, sharp-pointed, its sides erect, its middle lobe recurved, with a two-limbed diverging process at the base. The lip at its point is of the same rosy tint as the sepals and petals, but fades into white in its lower portion. *Column* white, slightly lobed.—*J. Bateman*.

---

Fig. 1. Side view of lip and column. 2. Front view of lip. 3. Ditto of column. 4. Pollen-masses:—*magnified*.







BARLERIA GIBSONI.

*Dr. Gibson's Barleria.*

Nat. Ord. ACANTHACEÆ.—DIANDRIA MONOGYNIA.

*Gen. Char.* Calyx 4-partitus, laciniis cruciatim oppositis, supera et infera plerumque majoribus. Corolla regulariter infundibuliformis v. hypocraterimorpha, 5-loba, ore dilatato, laciniis imbricatis, superiore plerumque brevior. Stamina 2, cum staminodiis 2 3 v. 4, didynama, circa basin tubi inserta. Antheræ oblongæ v. lineares, 2-loculares, loculis parallelis muticis. Stigma v. infundibuliforme, compressum, truncatum, limbo integro, v. angustum, oblique 2-fidum. Capsula circa basin fere 2-locularis, septo integro adnato, basi 2-4-sperma. Semina retinaculo suffulta.—Herbæ v. frutices, ramosæ. Inflorescentia spicata axillaris v. solitaria. Calyx 2-bracteolatus.

BARLERIA *Gibsoni*; fruticosa, glaberrima, foliis ovato- v. oblongo-lanceolatis acuminatis in petiolum brevem angustatis, margine minute ciliolatis, floribus subterminalibus paucis vix spicatis, bracteis parvis anguste ovatis, calycis foliolis exterioribus anguste subulatis interioribus elliptico-oblongis obtusis subacutisve viridibus, exterioribus duplo longioribus multotiesque majoribus, corollæ pallide purpureæ tubo infundibuliformi calycem æquante, limbi lobis subæqualiter rotundatis 2 inferioribus medio macula saturatiore notatis, ore pallido, staminibus 2 cum staminodiis 3 parvis subulatis.

BARLERIA *Gibsoni*. Dalzel in Hook. Kew Journ. Bot. v. 2. p. 339.

It has already been remarked in this work, that the hitherto much neglected Order *Acanthaceæ* abounds in beautiful garden plants, which, from their habit of flowering in winter, are especially desirable for stove cultivation in this climate. Such is the subject of the present Plate, a native of the Ghauts of Central India, for seeds of which the Royal Gardens are indebted to Dr. Anderson, of the Royal Gardens, Calcutta, which flowered at Kew in December, 1866. Handsome as it is, it falls very far short indeed of some of its congeners, also natives of the Western Indian Ghauts, and of which one, *B. grandiflora*, Dalzel, has leaves a span long, and spikes of flowers, whose corollas are four to four and a



half inches long by two inches diameter. The genus is a large one, and contains very many beautiful species.

DESCR. A small, quite glabrous *shrub*; our first year's plants are twelve to eighteen inches high, but will probably attain three or four feet. *Stems* branched, shrubby, terete. *Leaves* two to four inches long, shortly petioled, lanceolate or oblong or ovate-lanceolate, acuminate, rather rough at the margin, coriaceous, glaucous below; nerves distinct, running very obliquely. *Flowers* in very short terminal spikes, or axillary in the uppermost leaves. *Calyx* one and a half inch long; outer *sepals* very narrow subulate, not half the length of the inner, which are oblong, obtuse, convex, nerved. *Corolla* large, pale purple; *tube* as long as the calyx, funnel-shaped, paler; *lobes* spreading, orbicular, each one-third of an inch in diameter, inner rather smaller, two upper with a dark purple blotch in the centre. *Stamens* two, with three staminodes; *filaments* glabrous; *anthers* oblong, purple. *Stigma* narrow, very obliquely bifid.—J. D. H.

---

Fig. 1. Calyx,—*nat. size*. 2. Base of corolla and stamens. 3. Germen:—*magnified*.



GOOD SEEDS,



CARRIAGE FREE.



## SUTTON'S UNRIVALLED COLLECTIONS OF SEEDS FOR ONE YEAR'S SUPPLY.

### SUTTON AND SONS

ARE NOW PREPARED TO RECEIVE ORDERS FOR THE ABOVE,  
THE PRICES OF WHICH ARE AS FOLLOWS:—



#### FOR THE KITCHEN GARDEN.

	£.	s.	d.
No. 1. A complete Collection for one year's supply	3	3	0
No. 2. A complete Collection of ditto, quantities proportionately reduced	2	2	0
No. 3. A complete Collection of ditto	1	11	6
No. 4. A complete Collection of ditto	1	1	0
No. 5. A complete Collection of ditto	0	15	0
No. 6. A complete Collection of ditto	0	10	6

Nos. 1, 2, 3, 4, 5, free by Rail.

#### FOR THE FLOWER GARDEN.

	£.	s.	d.
No. 1. A complete Collection of the newest and most approved German and English varieties	2	2	0
No. 2. A complete Collection of ditto	1	11	6
No. 3. A complete Collection of ditto	1	1	0
No. 4. A complete Collection of ditto	0	15	0
No. 5. A complete Collection of ditto	0	10	6

Free by Post or Rail.

### SUTTON'S RINGLEADER PEA,

The very best and earliest in cultivation, Price 2s. per Quart.

### SUTTON'S SPRING CATALOGUE AND AMATEUR'S GUIDE FOR 1867

Is now ready, and will be sent post-free on receipt of Twelve Stamps. GRATIS TO CUSTOMERS.

All Goods Carriage Free (except very small parcels). 5 per cent. discount allowed for cash payment.

SUTTON & SONS, ROYAL BERKSHIRE SEED ESTABLISHMENT, READING.

### GENUINE SEEDS, CARRIAGE FREE.

### B. S. WILLIAMS'S

### NEW GENERAL PRICED SEED CATALOGUE FOR 1867

CAN BE HAD FREE ON APPLICATION. IT CONTAINS—

Vegetable Seeds.  
Agricultural Seeds.  
New Flower Seeds.  
Choice Florists' Flower Seeds.

Imported Flower Seeds.  
The best Annual, Biennial, and Perennial Flower Seeds.  
Gladioli and other Summer and Autumn Flowering Bulbs.  
Knives and every Garden Requisite.

A convenient Order Sheet enclosed.

B. S. WILLIAMS, Victoria and Paradise Nurseries, Upper Holloway, London, N.

Perfect Freedom from Coughs in 10 Minutes after use,  
And Instant Relief and a Rapid Cure of  
ASTHMA, CONSUMPTION, INFLUENZA, COUGHS, COLDS,  
And all Disorders of the Breath, Throat, and Lungs,  
are ensured by



Which have a most agreeable taste.

MORE CURES OF COUGHS, COLDS, AND HOARSENESS.

From Messrs. Fergyson and Son, Auctioneers, Leek.

"The beneficial effects we have derived from your Wafers make us feel it a duty to offer you our gratuitous testimony to their superiority over any other remedy we have ever tried for colds, coughs, and hoarseness, so peculiarly troublesome to our profession."

TO SINGERS AND PUBLIC SPEAKERS DR. LOCOCK'S WAFERS are invaluable for clearing and strengthening the voice, and have a pleasant taste. Price 1s. 1½d., 2s. 9d., and 4s. 6d. per box. Sold by all Chemists.

### IMPORTANT CAUTION.

### DR. LOCOCK'S

CONCENTRATED ESSENCE OF

### SARSAPARILLA AND BARK,

For purifying the Blood and strengthening  
the Constitution.

Price 2s. 9d., 4s. 6d., and 11s. per bottle.

See the words "DR. LOCOCK'S SARSAPARILLA AND BARK" in the Government Stamp, OUTSIDE THE PACKET, without which none can be genuine.

Particular attention is required to the above, as some persons copy the name (with a slight variation), calculated to mislead an unguarded person.



# HEATING BY HOT WATER.

---

It is now generally admitted that Buildings of any kind can be more effectually warmed by Hot Water than by any other means ; but as so much depends on the way in which the Apparatus is fixed, it is of the greatest importance that it be done by experienced men.

J. JONES & SONS are prepared to estimate for Warming, to any extent—

<b>GREENHOUSES.</b>	<b>CHURCHES.</b>	<b>FACTORIES.</b>
<b>CONSERVATORIES.</b>	<b>CHAPELS.</b>	<b>OFFICES.</b>
<b>VINERIES.</b>	<b>SCHOOLS.</b>	<b>WORKSHOPS.</b>
<b>HOTHOUSES.</b>	<b>READING ROOMS.</b>	<b>WAREHOUSES.</b>
<b>FORCING PITS.</b>	<b>LECTURE ROOMS.</b>	<b>DRYING ROOMS.</b>
<b>PEACH HOUSES.</b>	<b>BILLIARD ROOMS.</b>	<b>CELLARS.</b>
<b>PINE STOVES.</b>	<b>HALLS AND PASSAGES.</b>	<b>COACH-HOUSES.</b>
<b>ORCHARD HOUSES.</b>	<b>BATHS.</b>	<b>HARNESS ROOMS.</b>

J. JONES & SONS' Apparatus is simple in construction, moderate in cost, and economical in working.

It is equally available for the Amateur's Greenhouse, or the longest range of Forcing Houses ; for the smallest Chapel or the largest Church ; for Private Offices, or those of Public Companies.

It is admirably adapted for Dwelling Houses, as coils of pipes can be placed in any part, for warming the various rooms. One or more Baths may be heated from the same boiler, and a constant supply of hot water obtained in any part of the house.

For Warehouses and Workshops this system of heating is unsurpassed, as it is not only the means of keeping goods dry, but it also adds to the comfort of the workpeople, and thereby effects a saving in labour.

J. JONES & SONS recommend boilers of all kinds being set in brickwork, if possible ; but portable boilers can be supplied, if required.

---

**MATERIALS.**—All Materials supplied will be of the best quality.

**DELIVERY.**—Boilers of various kinds, and pipes and connections, being always in stock, can, at a very short notice, be sent to any part.

**FIXING.**—The Fixing will be done by experienced men, fully capable of finishing properly any work they may undertake ; and J. JONES & SONS are prepared to guarantee the effectual working of any apparatus fixed by their own men.

**ESTIMATES.**—Plans and Estimates will be sent on application.

---

**J. JONES & SONS,**  
**IRON MERCHANTS AND HORTICULTURAL ENGINEERS,**  
6, BANKSIDE, SOUTHWARK, LONDON, S.E.



Third Series.

No. 267.

VOL. XXIII. MARCH.

[Price 3s. 6d. col<sup>d</sup>. 2s. 6d. plain.]

OR No. 962 OF THE ENTIRE WORK.

CURTIS'S  
BOTANICAL MAGAZINE,

COMPRISING

THE PLANTS OF THE ROYAL GARDENS OF KEW,  
AND OF OTHER BOTANICAL ESTABLISHMENTS IN GREAT BRITAIN,  
WITH SUITABLE DESCRIPTIONS;

BY

JOSEPH DALTON HOOKER, M.D., F.R.S. L.S. & G.S.,

Director of the Royal Botanic Gardens of Kew.



Nature and Art to adorn the page combine,  
And flowers exotic grace our northern clime.

LONDON:

REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

1867.



# SHANKS' NEW PATENT LAWN MOWERS FOR 1867.

*Patronized on Five occasions, during the Season of 1864, by*

**HER MAJESTY THE QUEEN,**

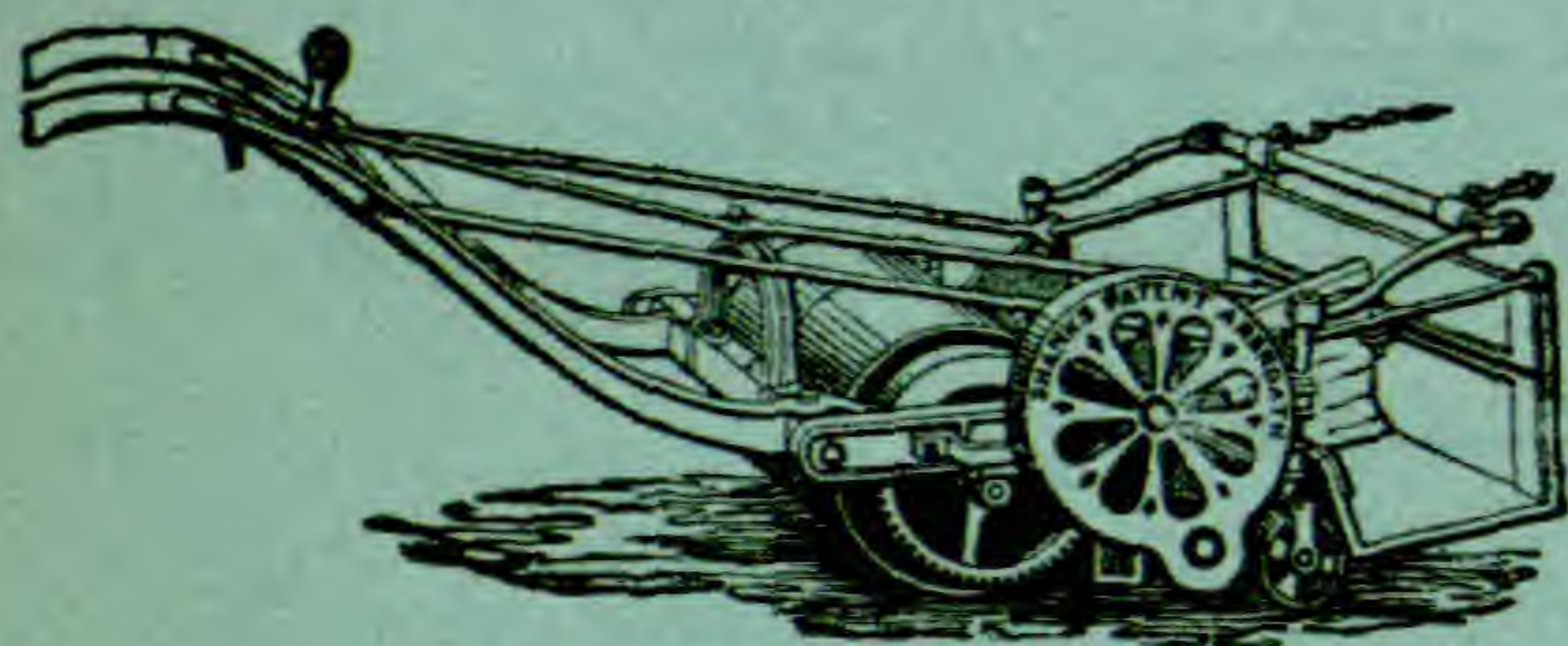
**AND ONCE BY HIS MAJESTY THE KING OF SAXONY;**

**DURING THE SEASON OF 1865 THEY WERE PATRONIZED ON FOUR OCCASIONS BY HER MAJESTY THE QUEEN;**

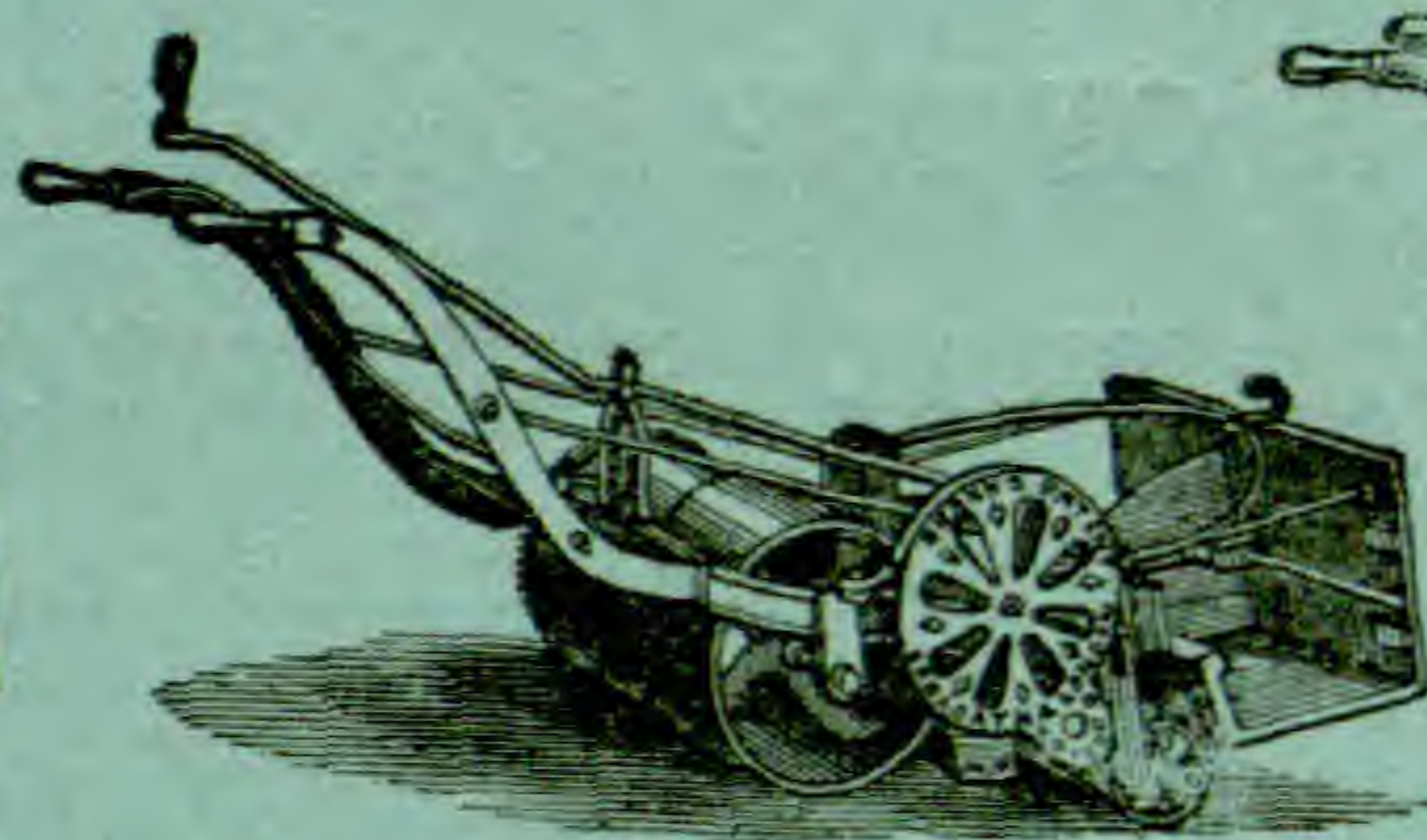
**ONCE BY HIS MAJESTY THE KING OF HOLLAND;**

**AND ONCE BY HIS MAJESTY THE KING OF PRUSSIA;**

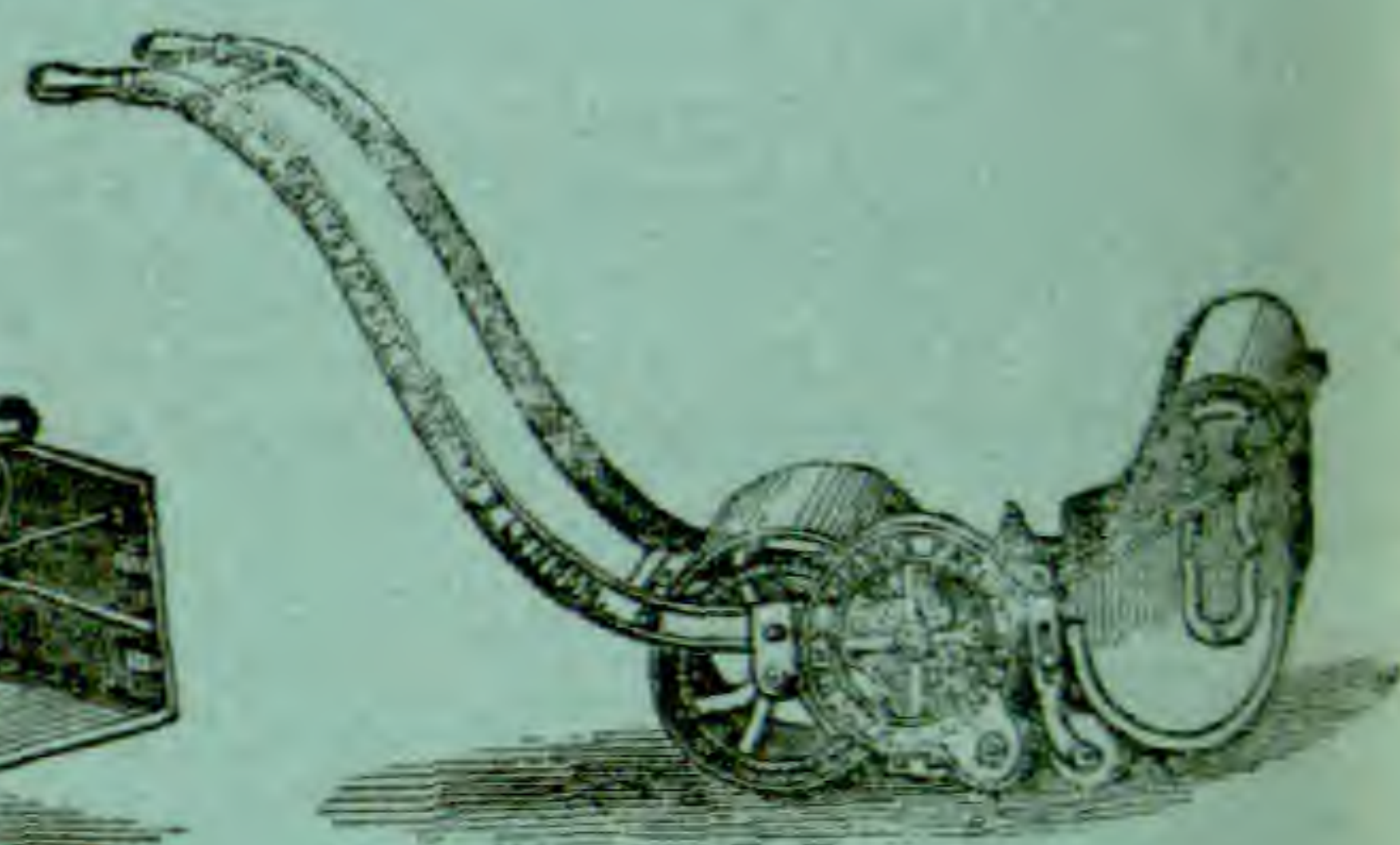
**AGAIN, DURING THE SEASON OF 1866, THEY WERE PATRONIZED ON FOUR OCCASIONS BY HER MAJESTY THE QUEEN.**



HORSE MACHINE.



PONY MACHINE.



HAND MACHINE.

ALEXANDER SHANKS & SON, in presenting their LAWN MOWERS for the Season of 1867, are gratified to be able to state that the demand for their celebrated Machines rapidly increases every year. The success which attended SHANKS' Machines during last Season is quite unparalleled in the history of the Lawn Mower.

A. S. & SON can confidently assure their numerous Friends and Customers and the Public generally that their endeavour will always be to supply a Machine, first-class in every way, one which cannot be surpassed if even equalled, whether for simplicity of construction, ease in working, or durability. None but the best materials and skilled workmen are employed in the manufacture of their Machines.

**PRICES**—Including Carriage to most of the principal Railway Stations and Shipping Ports in the Kingdom.

## SHANKS' NEW PATENT HAND MACHINE FOR 18.

10-inch Machine.....	£3 10 0	} Easily worked by a Lady. Do. by a Boy. Do. by a Man.	19-inch Machine.....	£7 12 6	{ Do. by a Man and a Boy. Do. by Two Men.
12-inch Machine.....	4 10 0		22-inch Machine.....	8 7 6	
14-inch Machine.....	5 10 0		24-inch Machine.....	8 17 6	
16-inch Machine.....	6 10 0				

Silent Movement for the four smallest sizes, 4s. extra; for the other sizes, 7s. 6d. extra.

## SHANKS' NEW PATENT PONY & DONKEY MACHINE.

Width of Cutter.	If with Patent Delivering Apparatus.
25-inch Machine .....	£12 10 0.....25s. extra.
28-inch Machine .....	14 10 0.....30s. extra.
30-inch Machine .....	15 15 0.....30s. extra.

Silent Movement, 12s. 6d. extra.

## SHANKS' NEW PATENT HORSE MACHINE.

Width of Cutter.	If with Patent Delivering Apparatus.
30-inch Machine .....	£19 0 0.....30s. extra.
36-inch Machine .....	22 0 0.....30s. extra.
42-inch Machine .....	26 0 0.....40s. extra.
48-inch Machine .....	28 0 0.....40s. extra.

Silent Movement, 20s. extra.

SHANKS' PATENT LAWN MOWERS cut the Grass on uneven as well as on level Lawns; and it is quite immaterial whether the Grass be wet or dry.

*Every Machine warranted to give ample satisfaction, and if not approved of, can be at once returned.*

## ALEXANDER SHANKS & SON,

### 27, LEADENHALL STREET, LONDON.

### MANUFACTORY, DENS IRONWORKS, ARBROATH.

A. S. and SON keep a Stock of Lawn Mowers at 27, Leadenhall Street, London, from which Orders can be at once executed. They also have at their London Warehouse a staff of experienced Workmen thoroughly acquainted with all the details of these Machines, so that they are enabled to repair Lawn Mowers in London as well as at the Manufactory.





GOOD SEEDS,  CARRIAGE FREE.

**SUTTON'S UNRIVALLED COLLECTIONS OF SEEDS  
FOR ONE YEAR'S SUPPLY.**

**SUTTON AND SONS**

ARE NOW PREPARED TO RECEIVE ORDERS FOR THE ABOVE,  
THE PRICES OF WHICH ARE AS FOLLOWS:—



**FOR THE KITCHEN GARDEN.**

	£.	s.	d.
No. 1. Complete Collection for 1 year's supply	3	3	0
No. 2. A complete Collection of ditto, quantities proportionately reduced	2	2	0
No. 3. A complete Collection of ditto	1	11	6
No. 4. A complete Collection of ditto	1	1	0
No. 5. A complete Collection of ditto	0	15	0
No. 6. A complete Collection of ditto	0	10	6

*Nos. 1, 2, 3, 4, 5, free by Rail.*

**FOR THE FLOWER GARDEN.**

	£.	s.	d.
No. 1. A complete Collection of the newest and most approved German and English varieties	2	2	0
No. 2. A complete Collection of ditto	1	11	6
No. 3. A complete Collection of ditto	1	1	0
No. 4. A complete Collection of ditto	0	15	0
No. 5. A complete Collection of ditto	0	10	6

*Free by Post or Rail.*

**SUTTON'S RINGLEADER PEA,**

The very best and earliest in cultivation, Price 2s. per Quart.

**SUTTON'S SPRING CATALOGUE AND AMATEUR'S GUIDE FOR 1867**

Is now ready, and will be sent post-free on receipt of Twelve Stamps. GRATIS TO CUSTOMERS.

**SUTTON'S FINE LAWN GRASS SEEDS,**

As used in the principal Lawns and Pleasure-Grounds in the Country. 1s. 3d. per pound, 24s. per bushel, carriage free.

*All Goods Carriage Free (except very small parcels). 5 per cent. discount allowed for cash payment.*

**SUTTON & SONS, ROYAL BERKSHIRE SEED ESTABLISHMENT, READING.**

**GENUINE SEEDS, CARRIAGE FREE.**

**B. S. WILLIAMS'**

**NEW GENERAL PRICED AND DESCRIPTIVE SEED CATALOGUE  
FOR 1867**

CAN BE HAD FREE ON APPLICATION.

**THE VEGETABLE SEED PART**

Contains LISTS of the best varieties of each kind of VEGETABLE. Only those sorts are recommended that can be relied upon for producing sure and good crops. Especial attention is directed to the following NEW and CHOICE KINDS, full descriptions of which will be found in the Catalogue.

WILLIAMS'S ALEXANDER BROCCOLI, 2s. 6d. per packet.

WILLIAMS'S MATCHLESS RED CELERY, 1s. per packet.

ORANGEFIELD DWARF TOMATO, 2s. per packet.

RAPHANUS CAUDATUS (The Wonderful Radish), 1s., 2s., and 5s. per packet.

NUNEHAM PARK ONION, 2s. 6d. per packet.

MALVERN HALL MELON, 1s. 6d. per packet.

DIGSWELL PRIZE ENDIVE, 1s. per packet.

COMPLETE COLLECTIONS of KITCHEN GARDEN SEEDS, to suit Gardens of various sizes, for Contents of which see page 44 in Catalogue:—

10s. 6d., 21s., 42s., 63s., 84s. each.

**THE FLOWER SEED PART**

Contains Imported and English-grown FLOWER SEEDS in Collections.

The Best of the New Introductions, 1866, in ANNUALS, BIENNIALS, and PERENNIALS.

Choice Strains of FLORISTS' FLOWERS.

The following are unequalled:—

PRIMULA (WILLIAMS'S superb strain, the finest in cultivation).—Red, White, or Mixed Seed, 2s. 6d., 3s. 6d., and 5s. per packet.

CALCEOLARIA (JAMES'S strain, the best variety for exhibition).—Colours are exceedingly rich, profusely spotted and veined, 2s. 6d., 3s. 6d., and 5s. per packet.

BALSAM (WILLIAMS'S finest strain).—A stand of flowers, the pro-

duction of this strain, was exhibited at the July Show of the Royal Botanic Society, and was the admiration of all. 1s. and 2s. 6d. per packet.

CINERARIA (WEATHERILL'S extra choice strain).—This is the most popular strain in Covent Garden Market. 3s. 6d. and 5s. per packet.

LILIUM AURATUM (a large importation of this beautiful Lily just received).—Strong Bulbs, 3s. 6d., 5s., 7s. 6d., and 10s. 6d. each.

**VICTORIA AND PARADISE NURSERIES, UPPER HOLLOWAY, LONDON, N.**




**NEW ROSES FOR 1867.****JOHN FRASER,**

OF THE LEA BRIDGE ROAD NURSERIES, N.E.,

HAS MUCH PLEASURE IN ANNOUNCING THAT HIS

**DESCRIPTIVE LIST OF CAREFULLY SELECTED NEW ROSES FOR 1867**

IS NOW READY, AND WILL BE FORWARDED ON APPLICATION.

 *The Plants are this Season unusually strong and healthy.***NOTICE.—NEW ROSES FOR 1867.**

FORTY-SIX VARIETIES, being the cream only of the best new kinds known on the Continent, now ready in magnificent strong healthy Plants, which will be eligible for sending out as soon as the weather will permit.

DESCRIPTIVE CATALOGUES GRATIS on application to the SUBSCRIBERS.

**WILLIAM WOOD & SON,**

WOODLANDS NURSERY, MARESFIELD, NEAR UCKFIELD, SUSSEX.—Feb. 9.

**WILLIAM CUTBUSH & SON**

**H**AVE the gratification of announcing that their GRAND EXHIBITION of HYACINTHS and other Spring Flowers will be held at the CRYSTAL PALACE, SYDENHAM, from SATURDAY, the 23rd of MARCH, to SATURDAY, the 6th of APRIL, 1867, both days inclusive.

**NEW CHRYSANTHEMUMS.**

**J**OHNSALTER'S DESCRIPTIVE CATALOGUE for 1867 is now ready, and will be sent on receipt of two Postage Stamps.

Versailles Nursery, William Street, Vale Place, Hammersmith, W.  
(Near Kensington Railway Station.)

**E**DGINGTON'S GARDEN NETTING, the cheapest and most durable, 1d. per square yard, or in Quantities of 250, 500, or 1000 Yards, carriage free.

EDGINGTON'S RICK CLOTHS for Sixty-two Years have maintained their celebrity as the best.

EDGINGTON'S MARQUEES and GARDEN TENTS are the prettiest.

EDGINGTON'S MARQUEES, for hire, are the most handsome and capacious.

HAYTHORN'S and WALLER'S NETTINGS. Samples and material free on application.

Be particular—FREDERICK EDGINGTON and CO., Thomas Street, Old Kent Road, London, S.E.

A Liberal Discount to the Trade!

International Exhibition, 1862, Class XIX. Honourable Mention.

**For Conservatories, Greenhouses, Orchard Houses, and Pits,**

Where Bedding Plants are kept during the Winter, the best and cheapest means to repel the Frost is

**H**AYS'S PATENT CONSTANT STOVE, which requires no Flue, is Cleanly, Portable, and Economical, requires attention only once in twelve hours, ensures a regular and constant heat at a trifling cost, and fully supplies a want long felt by every class of gardener.

Price 30s., 60s., and 80s. each. The Patent Fuel supplied in Bags containing two bushels, price 1s. 10d. per bushel. Bags charged 9d. each, and allowed for if returned.

These Stoves are also eminently adapted for Churches, Halls, Hospitals, Offices, Shops, Wine Cellars, Coach Houses, Harness Rooms, etc. etc., and can be made on the same principle to any size or design.

Particulars, Testimonials, and Reports, from Professor Pepper, Mr. Thomas Rivers, and other reliable authorities, free, from HENRY BAKER, 17, Harp Lane, Great Tower Street, London, sole Agent for Stoves and Fuel.



EVERY GARDEN REQUISITE KEPT IN STOCK  
 AT  
**CARTER'S GREAT LONDON SEED WAREHOUSE,**  
 237 AND 238, HIGH HOLBORN, LONDON, W.C.

## GROOM'S CHOICE NEW ZONAL GERANIUMS.

'MISS MARTIN,' beautiful soft rosy peach; 'SIR FITZROY KELLY,' striking scarlet-cerise;  
 'FLORIBUNDA ALBA NANA,' dwarf white. Pronounced to be the finest varieties ever raised,  
 as bedders or for pot culture. To be sent out in the Spring (1867)

**BY ROBERT WARD, THE ROSERY, IPSWICH.**

*The set of three Strong Autumn-struck Plants, 10s. 6d.*

Usual Discount to the Trade when not less than three Sets are taken.

## F. AND A. SMITH'S CHOICE SEEDS SAVED FROM THEIR OWN COLLECTION.

LEADING VARIETIES ONLY.

Geranium Tricolor, 2s. 6d. and 5s. per packet.  
 „ Bicolor, 2s. 6d. and 5s. „  
 „ Zonale, 1s., 2s., 2s. 6d. and 5s. „  
 Intermediate Stock (purple), 1s. „  
 Cineraria, 1s., 2s. 6d., and 5s. „

Coxcomb, 6d. and 1s. per packet.  
 Gloxinia (very fine), 1s. „  
 Petunia, 1s., 2s. 6d., and 5s. „  
 Mimulus, 6d. and 1s. „

NEW CATALOGUE for 1867, of TRICOLOR, BICOLOR, and ZONALE GERANIUMS,  
 NEW ROSES of 1867, with other NEW PLANTS, is now ready, and may be had on application.

**THE NURSERIES, DULWICH, S.**

## BENJAMIN EDGINGTON, MARQUEE, TENT, RICK-CLOTH, AND FLAG MANUFACTURER,

BY SPECIAL APPOINTMENT TO HER MAJESTY  
 AND H.R.H. THE PRINCE OF WALES.



MARQUEES & TENTS FOR HORTICULTURAL SHOWS  
 FOR SALE OR HIRE.



*Rick Cloths, New and Second-hand, with Poles, etc., complete.*

Tanned Netting for Fruit Trees, New and Repaired Scrims for Greenhouse Blinds, Frigi domo,  
 Garden Mats, etc.

*An Illustrated Catalogue Free by Post.*

Be particular to observe the Christian Name, **BENJAMIN EDGINGTON (only),**  
 2, DUKE STREET, LONDON BRIDGE, S.E. No other Establishment.

Perfect Freedom from Coughs in 10 Minutes after use,  
 And Instant Relief and a Rapid Cure of  
 ASTHMA, CONSUMPTION, INFLUENZA, COUGHS, COLDS,  
 And all Disorders of the Breath, Throat, and Lungs,  
 are ensured by



Which have a most agreeable taste.

CURES OF ASTHMA AND COUGHS.

*"Lymm, Cheshire.*

"In allaying any irritation of the chest or lungs, check-  
 ing all disposition to coughing, and promoting that ines-  
 timable boon, a comfortable night's refreshing sleep, they  
 certainly stand unrivalled.—J. H. EVANS, Druggist."

In every newspaper and periodical in the kingdom may  
 be seen testimonials of their wonderful efficacy.

To SINGERS AND PUBLIC SPEAKERS DR. LOCOCK'S  
 WAFERS are invaluable for clearing and strengthening the  
 voice. Price 1s. 1½d., 2s. 9d., and 4s. 6d. per box. Sold  
 by all Chemists.

## INDIGESTION AND BILE.

*The only effectual and pleasant-tasting*

**Stomachic Aperient and Antibilious Medicine**

IS

**DR. LOCOCK'S**

**EXCELSIOR WAFERS.**

*It acts promptly, tastes delightfully, and  
 requires no restraint in diet or habits.*

Sold at 1s. 1½d., 2s. 9d., and 4s. 6d., by all  
 Druggists, and by the Proprietors' Agents, Da  
 Silva and Co., 26, Bride Lane, Fleet Street,  
 London, E.C.



# BARR AND SUGDEN'S GUIDE

TO THE KITCHEN AND FLOWER GARDEN FOR 1867.

IT EMBRACES EVERY NOVELTY AND SPECIALITY WORTHY OF NOTICE IN  
**FLOWER AND VEGETABLE SEEDS.**

## INTENDING PURCHASERS

WILL BE PRESENTED WITH COPIES ON SENDING THEIR ADDRESSES.

### COLLECTIONS OF VEGETABLE SEEDS

Sent Carriage Paid.

21/., 30/., 42/., 63/., 84/., 105/., to 210/.

Smaller Collections made up if required.

### COLLECTIONS OF FLOWER SEEDS

Sent Post Paid.

3/6, 5/6, 7/6, 10/6, 15/., 21/., 42/., 63/., 84/.,

105/., to 210/.

*For full particulars of these Collections see the Guide.*

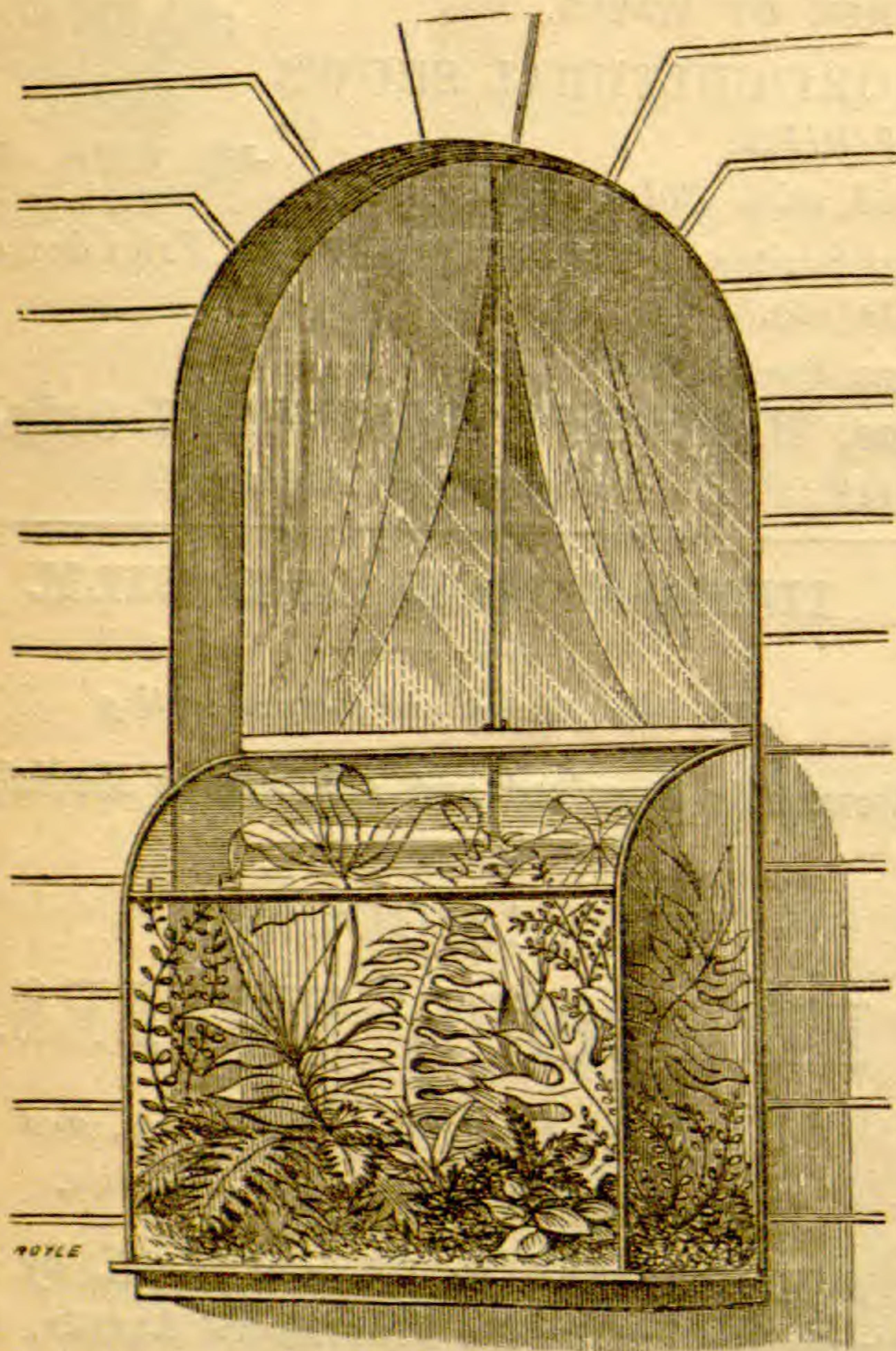
## BARR & SUGDEN'S WINDOW CONSERVATORIES & WINDOW FERNERIES

OF VARIOUS STYLES.

The present Illustrations are part of a series which B. & S. have fitted up. The introduction of these elegant structures is a great boon, especially in large towns. Window Conservatories (as Illustrated) being constructed generally in the front of the house, give increased elegance to the façade, and contribute to the retirement of the interior. Plants in bloom may be conserved in these for a longer period than if they were exposed to the drier atmosphere of the room, or ferns may be successfully grown in them; indeed they may be made an interesting source of recreation throughout the year.

Window Ferneries, which can be constructed with or without an Aquarium and Fountain, and are used principally on defectively lighted staircases, or to replace windows that have stained glass. They are also used in rooms where the prospect is objectionable; and as they abut some little distance outwardly, in addition to the refreshing nature of the green foliage, and abating no whit of the light, they give an enlarged appearance to the apartment.

WINDOW CONSERVATORY.



WINDOW FERNERY.



BARR AND SUGDEN, 12, KING STREET, COVENT GARDEN, W.C.







PLEROMA SARMENTOSA.

*Sarmentose Pleroma.*

Nat. Ord. MELASTOMACEÆ.—DECANDRIA MONOGYNIA.

*Gen. Char.* Calycis tubus paleaceus hirsutus v. strigosus, ovoideus campanulatus v. elongatus; lobi 5, subulati lanceolati v. oblongi, decidui. Petala 5, obovata, sæpe inæquilatera et retusa. Stamina 10, æqualia v. subæqualia, filamentis glabris pilosis v. glandulosis; antheræ consimiles, lineari-subulatæ, arcuatæ, connectivo basi breviter v. longius producto antice 2-tuberculato inappendiculato. Ovarium liberum v. basi costis 5 calyci adhærens, vertice hispidum v. setosum, 5-loculare; stylus filiformis, curvus, glaber v. pilosus, stigmatibus punctiformi. Capsula 5-valvis, calyce inclusa. Semina cochleata.—Frutices et suffrutices, rarius herbæ, Americæ australis tropicæ et subtropicæ incolæ, interdum scandentes, sæpius hispide v. strigoso-hirsutæ. Folia petiolata, ovata v. oblonga, integerrima. Flores sæpissime paniculati, purpurei v. violacei.

LASIANDRA sarmentosa; fruticulus patentim villosus, ramis ramulisque sarmentosis, foliis breviter petiolatis ovatis ovato-oblongisve acutis basi rotundatis cordatisve 7-nerviis utrinque pilosis, paniculis 3-chotomis terminalibus paucifloris, pedicellis brevibus, calycis tubo obovoideo v. subglobozo dense tomentoso, lobis subulato-lanceolatis recurvis tubo longioribus, petalis late cuneato-obovatis violaceis, filamentis glabris, antheris majoribus connectivo basi producto basi 2-tuberculato, minoribus connectivo breviori 2-tuberculato, ovarium ad medium calyci costis 5 adhærente.

LASIANDRA sarmentosa. Naud. in Ann. Sc. Nat. ser. 3. v. 13. p. 130.

CHÆTOGASTRA sarmentosa. DC. Prodr. v. 3. p. 134.

RHEXIA sarmentosa. Bonpl. Rhex. t. 10.

A very beautiful plant, discovered by Humboldt and Bonpland in the cool valleys of Peru, near Cuenca, and since collected by Dr. Jameson at the same spot, alt. 8000 feet, and elsewhere; by Spruce, at the base of Chimborazo; and by Dr. Seemann, at Loxa and Cuenca, etc., who observes that it is very common and called "Flore de Gallinaso." The specimen here figured was flowered in December, 1866, by our zealous correspondent Isaac Anderson Henry, F.L.S., of Edinburgh, from seeds sent by Dr. Jameson. As this

MARCH 1st, 1867.



plant is as well adapted for greenhouse cultivation as *Mono-chætum*, and is far more beautiful, it is one of the most valuable acquisitions to our houses of late years.

DESCR. A small, rather slender, straggling subscandent undershrub, covered with spreading, villous hairs. *Leaves* on petioles half an inch long; blade an inch and a half to two inches long, ovate, acute, quite entire, rounded or cordate at the base, five- to seven-nerved, hairy on both surfaces, bright green above, paler below. *Flowers* two to two and a half inches in diameter, deep violet and very handsome, in small, few-flowered panicles at the ends of the branchlets; peduncles and pedicels short, villous. *Calyx-tube* broadly ovoid; lobes longer than the tube, spreading, subulate-lanceolate. *Petals* broadly obovate-cuneate, retuse. *Anthers* dark purple, with green connectives filaments and tubercles; the longer with the connective produced at the base, where it bears two tubercles; smaller anthers with the connective tubercled, but not produced.—*J. D. H.*

---

Fig. 1. Large, and 2, small stamens. 3. Calyx, ovary, and style. 4. Transverse section of ovary. 5. Capsule:—*all magnified.*







TAB. 5630.

SARCANTHUS ERINACEUS.

*Hairy-stemmed Sarcanthus.*

Nat. Ord. ORCHIDÆ.—GYNANDRIA MONANDRIA.

Gen. Char. (*Vide supra*, TAB. 4639.)

SARCANTHUS *erinaceus*; pedunculo muriculato echinato racemoso, bracteis triangulis abbreviatis echinulatis, ovariis pedicellatis æque echinulatis, sepalis oblongis acutis æque echinatis, petalis ligulatis obtusis, labello excavato tridentato, utrinque sub columnâ plicato, dentibus lateralibus bidentatis, dente medio producto triangulo, calcare retrorso conico-cylindræo vacuo, gibbere pandurato sub columnâ, columnâ gracili elongatâ, rostello deflexo subulato elongato apice bidentato, caudiculâ ab ovato basi lineari, polliniis in stipite bifido centrice caudiculæ inserto reflexis. *Rchb. in Gard. Chron.* 1866.

AERIDES dasypogon. *Hort., non Lindl.*

SARCANTHUS Stowellianus. *Batem., mss.*

The first plant that I ever saw of this pretty *Sarcanthus* was bought, under the name of *Aerides rubrum*, about ten years ago, at one of Stevens's sales. After several years' cultivation, it flowered at Knypersley, and as I first noticed the open blossoms as I was passing through the Orchid houses in company with my lamented friend Hugh Stowell, I called it provisionally after him. I did not, however, describe or collate it at that time, and as I shortly afterwards met with it in Messrs. Low's collection under the name of *Aerides dasypogon*, I too hastily concluded that such was probably its real name, and made no further inquiries into the matter. In the autumn of last year, however, I met with the plant again—and this time under the name of *Sarcanthus erinaceus*—in the Royal Gardens at Kew, where it had been seen by Professor Reichenbach, and named as above by him. This name, which well describes the peculiarly shaggy or hedgehog-like appearance of the flower-stems, must therefore

MARCH 1ST, 1867.



stand. It is a rare plant and, always excepting *Saccolabium giganteum*, the slowest grower of its tribe. My plant, which is about four inches high, has at length begun to branch, and, as the branches all flower freely, my specimen has already become an attractive object;—in our grandchildren's days it will be quite charming! It flowers freely during the summer months in the East India house. Its introducer, both to Kew and to Clapton, was the Rev. Mr. Parish, who no doubt met with it in Moulmeyne.—*J. Bateman*.

---

Fig. 1. Front view of flower. .2. Side view of ditto:—*magnified*.







SIPHOCAMPYLUS HUMBOLDTIANUS.

*Humboldt's Siphocampylus.*

Nat. Ord. LOBELIACEÆ.—PENTANDRIA MONOGYNIA.

*Gen. Char.* Calycis tubus turbinatus v. hemisphæricus; lobi 5. Corollæ tubus sæpissime elongatus, incurvus et superne ventricosus, integer, rarissime et basi tantum fissus; limbi 2-labiati lobi 5, tubo breviores, superiores reflexi. Stamina connata; antheræ hirsutæ v. 2 inferiores barbatae.—Frutices suffrutices v. herbæ Americanæ, erectæ v. scandentes. Folia alterna v. verticillata. Pedicelli axillares. Flores albi v. rubri. Corolla sæpius pubescens.

SIPHOCAMPYLUS *Humboldtianus*; suffruticosus, ramulis patentim subvillosis, foliis alternis petiolatis subcoriaceis ovato-lanceolatis ovatisve acuminatis calloso-denticulatis superne glaberrimis subtus sparse pilosis, venis inconspicuis, pedicellis petiolo æquilongis, calycis glabri tubo turbinato, dentibus brevibus triangularibus, corolla fere 2-pollicari longe tubuloso integro, tubo e basi subinflato breviter subcylindræo, deinde pro maxima parte latiore compresso lente incurvo, lobis brevibus triangulari-lanceolatis patentibus.

SIPHOCAMPYLUS *Humboldtianus*. DC. *Prod.* v. 7. p. 398.

SIPHOCAMPYLUS *fulgens*. *Floral Magazine*, t. 313.

LOBELIA *Humboldtiana*. Presl, *Prod. Lob.* 35.

This elegant plant was sent for figuring by Mr. Bull, of Chelsea, with whom it flowered in November, 1866, and to whom the Royal Gardens are further indebted for a living plant that has also flowered. The plant is no doubt a native of Peru, whence most of its congeners have been brought, and it is evidently (if any dependence is to be placed on descriptions) the *S. Humboldtianus*, DC., of which, however, I have seen no authentic specimens; it also approaches *S. Peruvianus*, but is larger in all its parts, has broader leaves and pubescent stems, and different calyx-lobes. The genus *Siphocampylus* is very nearly allied to *Lobelia*, and like it, abounds in showy flowered plants. Upwards of fifty species have been described, of which scarce a dozen have been introduced into our gardens. Some are climbers, and, coming

MARCH 1ST, 1867.



from the cooler regions of the Andes, may be expected to grow in a temperate house. The present is a very choice plant, and succeeds well in a warm greenhouse, when it is very attractive.

DESCR. A small bush, three feet high, branching from the base. *Stem* and *branches* pubescent with spreading leaves, purplish-brown, slender, flexuous, but apparently not scandent. *Leaves* alternate, on slender petioles three-quarters of an inch long, ovate or ovate-lanceolate, acuminate, acute or rounded at the base, irregularly minutely toothed or serrate, dark green and glabrous above, paler and pilose beneath, rather coriaceous; nerves very faint. *Pedicels* axillary, solitary, slender, as long as the petioles. *Flowers* drooping, decurved, bright scarlet. *Calyx* glabrous, small; tube turbinate or subcampanulate, angled; teeth very small. *Corolla* almost two inches long, scarce half an inch broad at the broadest part, laterally compressed, ribbed, lower quarter narrower, subcylindric, with an inflated base, remaining three-quarters gently swelling, arched; lobes one-third of an inch long, triangular-lanceolate, recurved. *Anthers* exserted, violet-purple, nearly glabrous. *Style* very slender, stigma small. —*J. D. H.*

---

Fig. 1. Calyx, ovary, and style:—*magnified.*





W. Fitch, del. et lith.

Vincent Brooks, Imp



ONCIDIUM SERRATUM.

*Serrated Oncidium.*

Nat. Ord. ORCHIDÆ.—GYNANDRIA MONANDRIA.

*Gen. Char. (Vide supra, TAB. 4148.)*

ONCIDIUM *serratum*; pseudobulbis ovalibus elatis diphyllis, foliis erectis rigidis acutis basi angustatis canaliculatis, paniculâ pauciflorâ brevioribus, sepalis serrato-crispatis, dorsali reniformi, lateralibus multo longioribus obovatis patentissimis, petalis ovatis acutis serrato-crispatis conniventibus, labello multo minore hastato, laciniis acutis intermediâ lineari obtusâ medio constrictâ lateralibus acuminatis triplo minoribus (cristâ depressâ crenulatâ), columnæ alis subulatis ascendentibus.

ONCIDIUM *serratum*. *Lindl. Sert., Rchb. in Walpers Ann.* vi.

ONCIDIUM *diadema*. *Hort.*

I was much struck with this very remarkable *Oncidium*, which I had the good fortune to see in flower in the Bishop of Winchester's collection at Farnham Castle, in December last. It has the colour and somewhat the appearance of *O. crispum*, but the flowers are tossed about after a strange and fantastic fashion, which will no doubt become still more *prononcée* as the plant gathers its full strength and sends forth twining scapes nine or ten feet long. It belongs to a peculiar group, that was at one time regarded as a distinct genus, *i. e.* *Cyrtochilum*, but which is now more properly considered a subgenus of *Oncidium*. Some of them—the *Cyrtochilum volubile* of Poeppig, for example—have stems twenty feet high. Mr. Linden was the introducer of the present plant, which he sold under the unwarranted name of *O. diadema* in Stevens's rooms. It is a native of Peru, and must be regarded as a moderately "cool" orchid.

DESCR. *Pseudobulbs* tall and oval, bearing one or two long, rigid, erect, acute *leaves*, which are narrowed at the base and canaliculate. *Panicle* lax, many-flowered, much

MARCH 1ST, 1867.



longer than the leaves (in wild specimens nine or ten feet long). *Sepals* with crisp and serrate margins, the upper one kidney-shaped, the lateral ones very much longer, obovate and spread open, of a brown chocolate colour, tipped and margined with yellow. *Petals* same colour as the sepals, than which they are much shorter, ovate, acute, connivent. *Lip* very small, hastate, the side portions being acuminate and three times less than the central, which is linear, obtuse, and narrowed in the centre, with a depressed, serrate, or crenulate crest; the colour is similar to that of the sepals and petals, with more yellow about the crest. *Column* with awl-shaped, ascending wings.—*J. Bateman.*

---

Fig. 1. Front view of lip and column:—*magnified.*







## SYNADENIUM GRANTII.

*Captain's Grant's Milkbush.*

Nat. Ord. EUPHORBIACEÆ.—MONÆCIA MONANDRIA.

*Gen. Char.* *Involucrum* campanulato-hemisphæricum, regulare, 5-lobum, 5-glandulosum, glandulis in cupulam horizontalem plano-concavam margine lobulatam integram v. lobos involucri includentem coalitis. *Flores masculi* 25–30, in fasciculos 5 lobis involucri oppositos dispositi, ecalyculati. *Bracteolæ* aliæ inter fasciculos lineares distinctæ apice fimbriatæ, aliæ circa florem femineum ultra medium in tubum membranaceum apice fimbriatum coalitæ. *Flos femineus* centralis, obsolete calyculatus. *Styli* ad medium connati. *Semen* carunculatum.—Frutices v. arbusculæ Africani, ramis teretibus carnosus. Folia sparsa, integra. Cymæ terminales, corymbosæ, laxæ, 2–3-chotomæ. Involucra alia in dichotomiis sessilia, alia terminalia, basi foliis floralibus 2-nis oppositis suffulta. Boiss.

SYNADENIUM *Grantii*; frutex erectus, ramosus, glaberrimus, ramis crassis teretibus, foliis obovato-spathulatis obtusis in petiolum brevem attenuatis, floralibus parvis appressis tomentosis involucri æquilongis apice rotundatis, involucri pulvinati annularis integerrimi tomentosi lobis margine interiori pulvini insertis erectis late oblongis gibbis apice dentatis, calyculis masculis sub-5-lobis, lobis angustis ciliatis.

During Captains Speke and Grant's adventurous journey to the lake-feeders of the Nile, the latter of the distinguished explorers made an excellent collection of dried plants, which has thrown great light on the botany of Central Africa; together with some seeds, which vegetated in the Royal Gardens, including the beautiful *Mussaenda luteola* (Plate 5573). The dried plants were examined by Dr. Thomson, and are enumerated in the Appendix to Captain Speke's work; amongst them was a fragment of a succulent Euphorbiaceous plant, which, having retained its vitality, was taken by Dr. Thomson to the propagating pits, and being planted, has now developed into a striking green Euphorbiaceous bush, seven feet high,—the subject of this Plate. It belongs to a very curious genus, *Synadenium*, closely allied to *Euphorbia* itself, established by M. Boissier in his excellent

MARCH 1ST, 1867.



monograph of *Euphorbia* and its allies, published in the fifteenth volume of De Candolle's 'Prodromus.' The genus as there constituted consists of two species, a Natal and Madagascar one; these being described from dried specimens are necessarily difficult of recognition, and *S. Grantii* is evidently closely allied to the Natal *S. arborescens*, but according to Boissier's careful description that must be a much smaller plant in all its parts, with longer petioles; and the involucre in our species differs from it, and indeed from the generic character, in being entire.

*S. Grantii* was found by Captain Grant near villages in lat.  $3^{\circ} 15' N.$ , in February, 1862, and there only. The Kew plant flowered in November, 1866.

DESCR. An erect bush, six to ten feet high, with a stout, terete, green stem, few very thick, erect branches, and columnar branchlets thicker than the thumb. *Leaves* scattered, three to four inches long, obovate-spathulate, obtuse, not very succulent, quite entire, dark green above, paler below. *Cymes* axillary, corymbosely branched, six to eight inches long, sparingly dichotomously, green. *Pedicels* purplish. *Floral leaves* or *bracts* appressed, obtuse, tomentose, green. *Involucre* a quarter of an inch in diameter, consisting of an annular, tomentose, red-purple cushion, on the inner margin of which are five broadly-oblong, pubescent, toothed, erect scales. *Stamens* on separate cymes from the pistils, twenty to thirty, with purple anthers and fimbriate calyculs at the base of their pedicels. *Styles* green, with bifid recurved stigmas.—*J. D. H.*

---

Fig. 1. Female and, 2, male involucres. 3. Scale of ditto. 4. Male flower and calyculus. 5. Pistil:—*all magnified.*







PEPEROMIA ARIFOLIA; var. *argyreia*.

*Arum-leaved Peperomia; silver-striped var.*

Nat. Ord. PIPERACEÆ.—DIANDRIA MONOGYNIA.

Gen. Char. (*Vide supra*, TAB. 5568.)

PEPEROMIA *arifolia*; acaulis, glaberrima, foliis alternis longe petiolatis ovato-v. cordato-rotundatis acutis integerrimis supra basin peltatis 7-9-nerviis subsucculentis junioribus concavis, superne læte viridibus opacis, subtus pallidis, petiolis rubris, amento longe pedunculato terminali v. laterali gracili elongato, pedunculo petiolis æquilongo, floribus confertis, bracteis peltatis breviter stipitatis, filamentis brevibus crassis, ovario obovoideo, stigmatibus sessilibus globosis pubescentibus.

PEPEROMIA *arifolia*. Miquel, *Syst. Piperac.* p. 72. Martius, *Fl. Bras. Piperac.* p. 9. t. 2. f. 9.

PIPER *arifolia*. Hort. Petrop.

Var. *argyreia*; foliis inter nervos albo-fasciatis.

Under Plate 5668 there was figured a beautiful *Peperomia* from the collection of our friend Mr. Wilson Sanders, F.R.S., that had been cultivated in his and several other establishments under the name of *P. arifolia*, but which was there shown to be quite a distinct species; the present Plate confirms this opinion, and at the same time affords the opportunity of figuring an equally beautiful species. The true *P. arifolia*, as here shown, has no stem, alternate leaves that are peltate, very broad, less concave, and not two-lobed at the base; whereas the *P. marmorata* had erect stems, opposite, narrow and very thick leaves, two-lobed at the base where the petiole is inserted. Both are natives of South Brazil, and were collected by Mr. Weir, Collector for the Horticultural Society. The specimen here figured flowered in the establishment of Mr. Bull, of Chelsea, in November, 1866; it is a very beautiful plant, and like so many of its congeners, is well adapted for placing along the edge of a shelf in a

MARCH 1ST, 1867.



tropical house, both because of its beautifully-marbled leaves, and the length of time which these keep in good condition. In fact few plants are better adapted for permanent bordering in tropical houses than *Peperomias*, their leaves varying so much in depth of colour, in marbling, in the different hues of their upper and under surfaces, and in the colour of their stalks; then too they are not attractive to insects, make no litter, and give very little trouble in propagating and cultivating.

DESCR. *Rhizome* very short, rooting, as thick as the little finger. *Leaves* tufted at the apex of the rhizome, alternate; petioles dark red, four to eight inches long, terete; blade three to five inches long, orbicular-ovate or -cordate, acute, rounded retuse or two-lobed at the base, quite entire, rather succulent, concave, bright green but not shining above with broad white belts between the nerves, pale below. *Peduncles* as long as and of the same colour as the petioles. *Catkin* three to four inches long, slender, pale green. *Flowers* close set, but not densely packed, very minute. *Bract* peltate, orbicular, with a short, stout stalk. *Filaments* very short; anthers oblong. Ovary obovoid, with a globular, sessile stigma.—*J. D. H.*

---

Fig. 1. Portion of catkin. 2. and 3. Side and front views of bract, stamen, and pistil:—*all magnified.*



# GREEN'S PATENT SILENS MESSOR,

OR

NOISELESS LAWN MOWING, ROLLING AND COLLECTING MACHINES.

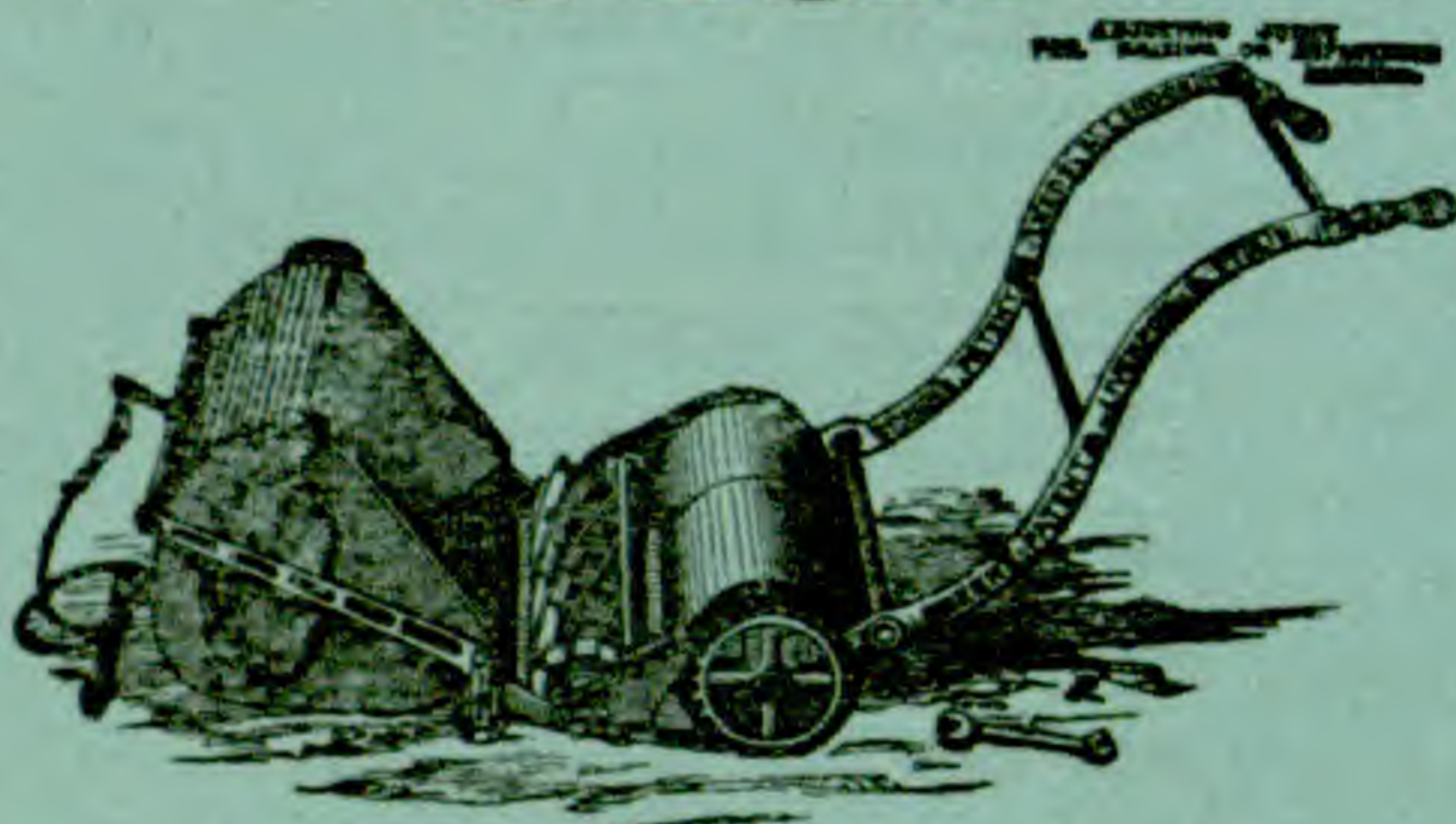
FITTED WITH PATENT SELF-SHARPENING CYLINDER CUTTERS.

By Special Appointment  
Sole Manufacturer



To Her Most Gracious  
Majesty the Queen.

Every Machine is warranted to give entire satisfaction, and if not approved of can be returned unconditionally.



Green's Patent Lawn Mowers have proved to be the best, and have carried off every prize that has been given in all cases of competition.

## PRICES OF HAND MACHINES.

To cut 10 inches ...	£3 10 0	...	Suitable for a Lady	To cut 18 inches ...	£7 10 0	...	Suitable for one person
" 12 "	4 10 0	...	"	" 20 "	8 0 0	...	Suitable for two persons
" 14 "	5 10 0	...	Suitable for one person	" 22 "	8 10 0	...	"
" 16 "	6 10 0	...	"	" 24 "	9 0 0	...	"

Prices of Horse, Pony, and Donkey Machines, including patent self-delivery box; cross stay complete; suitable or attaching to ordinary chaise-traces or gig harness.

To cut 26 inches ...	£13 0 0	...	Leather Boots for Donkey, 18s.	To cut 30 inches ...	£21 0 0	...	Leather Boots for Pony, 22s.
" 28 "	15 0 0	...		" 36 "	24 0 0	...	
" 30 "	17 0 0	...		" 42 "	27 0 0	...	
				" 48 "	30 0 0	...	Leather Boots for Horse, 26s.

The 26, 28, and 30 inches can easily be worked by a donkey, or by two men, on an even lawn, the 30 and 36 inches by a pony, and 42 and 48 inches by a carriage horse; and, as the Machines make no noise in working, the most spirited animal can be employed without fear of its running away, or in any way damaging the Machine.

Both the Horse, Pony, Donkey, and Hand Machines possess (over all other Makers) the advantages of self-sharpening: the cutters being steel on each side, when they become dull or blunt by running one way round the cylinder, can be reversed again and again, bringing the opposite edge of the cutter against the bottom blade, when the Machine will cut equal to new. Arrangements are made that the cylinder can be reversed, by any unexperienced person, in two or three minutes.

The above Machines are made from the best materials, and of superior workmanship; are delivered Carriage Free to all the principal Railway Stations and Shipping Ports in England.

# GREEN'S IMPROVED NEW PATENT ROLLER,

FOR

LAWNS, DRIVES, BOWLING GREENS, CRICKET FIELDS, AND GRAVEL PATHS.

SUITABLE FOR HAND OR HORSE POWER.

## PRICES OF

## HAND ROLLERS.

Delivered at the principal  
Railway Stations in England.

Diam. 30 in., len. 32 in.	£7 10
" 24 " 26 "	4 10
" 20 " 22 "	3 10
" 16 " 17 "	2 15



## PRICES OF

## ROLLERS FITTED WITH SHAFTS

Suitable for Pony or Horse  
Power.

Diam. 30 in., len. 32 in.	£10 0
" 30 " 36 "	10 15
" 30 " 42 "	11 15
" 30 " 48 "	13 10
" 30 " 60 "	15 10
" 30 " 72 "	17 10
" 80 " 84 "	19 10

Thomas Green & Son, Smithfield Iron Works, Leeds; 44 & 45, Blackfriars Road, London, S.; and 19, Eden Quay, Dublin.



# HEATING BY HOT WATER.

---

It is now generally admitted that Buildings of any kind can be more effectually warmed by Hot Water than by any other means; but as so much depends on the way in which the Apparatus is fixed, it is of the greatest importance that it be done by experienced men.

J. JONES & SONS are prepared to estimate for Warming, to any extent—

GREENHOUSES.	CHURCHES.	FACTORIES.
CONSERVATORIES.	CHAPELS.	OFFICES.
VINERIES.	SCHOOLS.	WORKSHOPS.
HOTHOUSES.	READING ROOMS.	WAREHOUSES.
FORCING PITS.	LECTURE ROOMS.	DRYING ROOMS.
PEACH HOUSES.	BILLIARD ROOMS.	CELLARS.
PINE STOVES.	HALLS AND PASSAGES.	COACH-HOUSES.
ORCHARD HOUSES.	BATHS.	HARNESS ROOMS.

J. JONES & SONS' Apparatus is simple in construction, moderate in cost, and economical in working.

It is equally available for the Amateur's Greenhouse, or the longest range of Forcing Houses; for the smallest Chapel or the largest Church; for Private Offices, or those of Public Companies.

It is admirably adapted for Dwelling Houses, as coils of pipes can be placed in any part, for warming the various rooms. One or more Baths may be heated from the same boiler, and a constant supply of hot water obtained in any part of the house.

For Warehouses and Workshops this system of heating is unsurpassed, as it is not only the means of keeping goods dry, but it also adds to the comfort of the workpeople, and thereby effects a saving in labour.

J. JONES & SONS recommend boilers of all kinds being set in brickwork, if possible; but portable boilers can be supplied, if required.

---

**MATERIALS.**—All Materials supplied will be of the best quality.

**DELIVERY.**—Boilers of various kinds, and pipes and connections, being always in stock, can, at a very short notice, be sent to any part.

**FIXING.**—The Fixing will be done by experienced men, fully capable of finishing properly any work they may undertake; and J. JONES & SONS are prepared to guarantee the effectual working of any apparatus fixed by their own men.

**ESTIMATES.**—Plans and Estimates will be sent on application.

---

**J. JONES & SONS,**  
**IRON MERCHANTS AND HORTICULTURAL ENGINEERS,**  
6, BANKSIDE, SOUTHWARK, LONDON, S.E.



Third Series.

No. 268.

VOL. XXIII. APRIL.

[Price 3s. 6d. col<sup>d</sup>. 2s. 6d. plain.]

OR No. 963 OF THE ENTIRE WORK.

CURTIS'S  
BOTANICAL MAGAZINE,

COMPRISING

THE PLANTS OF THE ROYAL GARDENS OF KEW,  
AND OF OTHER BOTANICAL ESTABLISHMENTS IN GREAT BRITAIN,  
WITH SUIABLE DESCRIPTIONS;

BY

JOSEPH DALTON HOOKER, M.D., F.R.S. L.S. & G.S.,  
Director of the Royal Botanic Gardens of Kew.



Nature and Art to adorn the page combine,  
And flowers exotic grace our northern clime.

LONDON:

REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

1867.



# SHANKS' NEW PATENT LAWN MOWERS FOR 1867.

*Patronized on Five occasions, during the Season of 1864, by*  
**HER MAJESTY THE QUEEN,**

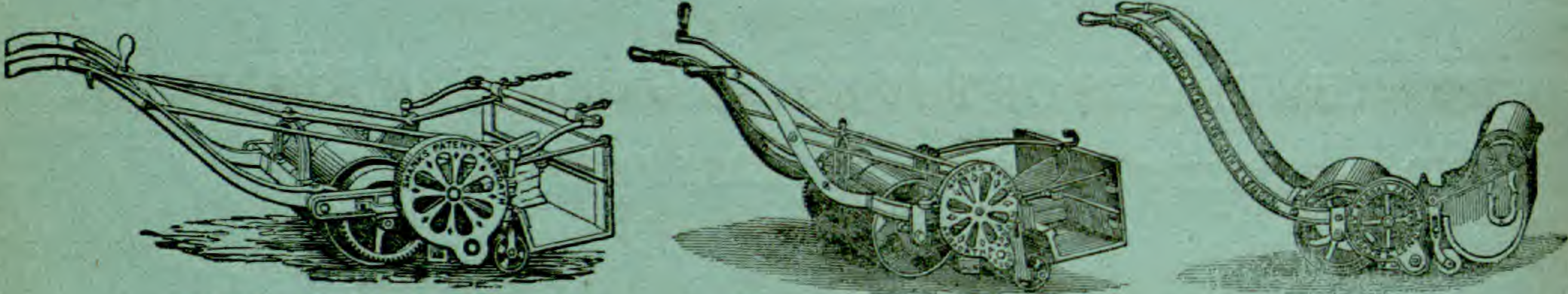
**AND ONCE BY HIS MAJESTY THE KING OF SAXONY;**

**DURING THE SEASON OF 1865 THEY WERE PATRONIZED ON FOUR OCCASIONS BY HER MAJESTY THE QUEEN;**

**ONCE BY HIS MAJESTY THE KING OF HOLLAND;**

**AND ONCE BY HIS MAJESTY THE KING OF PRUSSIA;**

**AGAIN, DURING THE SEASON OF 1866, THEY WERE PATRONIZED ON FOUR OCCASIONS BY HER MAJESTY THE QUEEN.**



HORSE MACHINE.

PONY MACHINE.

HAND MACHINE.

ALEXANDER SHANKS & SON, in presenting their LAWN MOWERS for the Season of 1867, are gratified to be able to state that the demand for their celebrated Machines rapidly increases every year. The success which attended SHANKS' Machines during last Season is quite unparalleled in the history of the Lawn Mower.

A. S. & SON can confidently assure their numerous Friends and Customers and the Public generally that their endeavour will always be to supply a Machine, first-class in every way, one which cannot be surpassed if even equalled, whether for simplicity of construction, ease in working, or durability. None but the best materials and skilled workmen are employed in the manufacture of their Machines.

**PRICES**—Including Carriage to most of the principal Railway Stations and Shipping Ports in the Kingdom.

## SHANKS' NEW PATENT HAND MACHINE FOR 18.

10-inch Machine.....	£3 10 0	} Easily worked by a Lady. Do. by a Boy. Do. by a Man.	19-inch Machine.....	£7 12 6	{ Do. by a Man and a Boy. Do. by Two Men.
12-inch Machine.....	4 10 0		22-inch Machine.....	8 7 6	
14-inch Machine.....	5 10 0		24-inch Machine.....	8 17 6	
16-inch Machine.....	6 10 0				

Silent Movement for the four smallest sizes, 4s. extra; for the other sizes, 7s. 6d. extra.

## SHANKS' NEW PATENT PONY & DONKEY MACHINE.

Width of Cutter.	If with Patent Delivering Apparatus.
25-inch Machine.....	£12 10 0.....25s. extra.
28-inch Machine.....	14 10 0.....30s. extra.
30-inch Machine.....	15 15 0.....30s. extra.

Silent Movement, 12s. 6d. extra.

## SHANKS' NEW PATENT HORSE MACHINE.

Width of Cutter.	If with Patent Delivering Apparatus.
30-inch Machine.....	£19 0 0.....30s. extra.
36-inch Machine.....	22 0 0.....30s. extra.
42-inch Machine.....	26 0 0.....40s. extra.
48-inch Machine.....	28 0 0.....40s. extra.

Silent Movement, 20s. extra.

SHANKS' PATENT LAWN MOWERS cut the Grass on uneven as well as on level Lawns; and it is quite immaterial whether the Grass be *wet or dry*.

*Every Machine warranted to give ample satisfaction, and if not approved of, can be at once returned.*

**ALEXANDER SHANKS & SON,**  
**27, LEADENHALL STREET, LONDON.**

**MANUFACTORY, DENS IRONWORKS, ARBROATH.**

A. S. and SON keep a Stock of Lawn Mowers at 27, Leadenhall Street, London, from which Orders can be at once executed. They also have at their London Warehouse a staff of experienced Workmen thoroughly acquainted with all the details of these Machines, so that they are enabled to repair Lawn Mowers in London as well as at the Manufactory.



# BOTANICAL MAGAZINE ADVERTISER.

---

## EVERY GARDEN REQUISITE KEPT IN STOCK

AT

## CARTER'S GREAT LONDON SEED WAREHOUSE,

237 & 238, HIGH HOLBORN, LONDON, W.C.

---

### CHOICE SEEDS.

WILLIAM CUTBUSH AND SON strongly recommend the following Seeds:—  
 PRIMULA SINENSIS FIMBRIATA, of the finest possible strain, Red, White, mixed, 2s. 6d., 3s. 6d., and 5s. per packet.  
 CALCEOLARIA, saved from James's choicest strain, very fine, 2s. 6d., 3s. 6d., and 5s. per packet.  
 CINERARIA from named flowers, 2s. 6d., 3s. 6d., and 5s. per packet.  
 SNOW'S WINTER WHITE BROCCOLI, true, W. C. & Son's own saving, 2s. 6d. per packet.  
 NUNEHAM PARK ONION, 2s. 6d. per packet.

For other Choice Seeds see Catalogue, free per Post.  
 HIGHGATE NURSERIES, LONDON, N.

---

### HINTS ON THE CULTIVATION OF TRICOLORED GERANIUMS.

See F. & A. SMITH'S New Catalogue for 1867.  
 DULWICH, SURREY.

---

### NEW TRICOLORED GERANIUMS.

F. AND A. SMITH'S CATALOGUE FOR 1867, containing Descriptions of their Splendid Varieties of the above, which have obtained the following awards:—

Two £5 Prizes for the Collection ..... Crystal Palace.

A Prize for the Collection.....	Liverpool.	Five Certificates.....	Peterborough.
A Prize for the Collection.....	Manchester.	Five Certificates.....	Nottingham.
A Prize for the Collection.....	Leicester.	Six Certificates.....	Brighton.
A Prize for the Collection.....	Birmingham.	One Certificate.....	International.

May now be had on application.

DULWICH, SURREY.

---

### NEW BICOLORED AND ZONALE GERANIUMS.

F. AND A. SMITH'S CATALOGUE FOR 1867 is now ready, containing Descriptions of the above, which have obtained Thirteen Certificates.

DULWICH, SURREY.

---

### NEW ROSES, 1867.

F. AND A. SMITH'S DESCRIPTIVE CATALOGUE of the above may be had on application.  
 Strong seasoned Plants now ready.

DULWICH, SURREY.

---

### BENJAMIN EDGINGTON,

### MARQUEE, TENT, RICK-CLOTH, AND FLAG MANUFACTURER,

BY SPECIAL APPOINTMENT TO HER MAJESTY  
 AND H.R.H. THE PRINCE OF WALES.



MARQUEES & TENTS FOR HORTICULTURAL SHOWS  
 FOR SALE OR HIRE.

*Rick Cloths, New and Second-hand, with Poles, etc., complete.*



TANNED NETTING FOR FRUIT TREES, NEW AND REPAIRED.

SCRIMS FOR GREENHOUSE BLINDS, FRIGI DOMO, ETC.

*An Illustrated Catalogue Free by Post.*

Be particular to observe the Christian Name, **BENJAMIN EDGINGTON** (only),  
 2, DUKE STREET, LONDON BRIDGE, S.E. No other Establishment.



**NEW CHRYSANTHEMUMS.**

**JOHN SALTER'S DESCRIPTIVE CATALOGUE** for 1867 is now ready, and will be sent on receipt of two Postage Stamps.

**Versailles Nursery, William Street, Vale Place, Hammersmith, W.**  
(Near Kensington Railway Station.)

**EDGINGTON'S GARDEN NETTING**, the cheapest and most durable, 1d. per square yard, or in Quantities of 250, 500, or 1000 Yards, carriage free.

**EDGINGTON'S RICK CLOTHS** for Sixty-two Years have maintained their celebrity as the best.

**EDGINGTON'S MARQUEES** and **GARDEN TENTS** are the prettiest.

**EDGINGTON'S MARQUEES**, for hire, are the most handsome and capacious.

**HAYTHORN'S** and **WALLER'S NETTINGS**. Samples and material free on application.

Be particular—**FREDERICK EDGINGTON and CO.**, Thomas Street, Old Kent Road, London, S.E.

A Liberal Discount to the Trade!

International Exhibition, 1862, Class XIX. Honourable Mention.

**THE NEW ENGLISH HYBRID PERPETUAL ROSES AND ZONAL GERANIUMS.**

**ROBERT WARD,**

Raiser of the Celebrated Rose **JOHN HOPPER**, begs to announce that his

**BEDDING ROSES,**

**MRS. WARD, MRS. JOHN BERNERS, AND IPSWICH GEM,**

Will be sent out in the Spring; also,

**GROOM'S ZONAL GERANIUMS,**

**MISS MARTIN, SIR FITZROY KELLY, AND FLORIBUNDA ALBA NANA.**

The Set of Roses, 21s. The Set of Geraniums, 10s. 6d. Package included.

See 'Journal of Horticulture,' June 26th, and July 31st; also 'Floral Magazine' for September, October, and the present month, in which they are figured.

A Descriptive Circular will be sent on application. Beautiful Illustrations, each 13 Stamps.

The following Firms have already ordered a supply:—

Bell, Mr. John, Norwich.  
Ballantyne and Sons, Messrs., Dalkeith.  
Bull, Mr. W., Chelsea.  
Bunyard and Sons, Messrs., Maidstone.  
Barrett, Mr. J., Bury St. Edmunds.  
Cant, Mr. B. R., Colchester.  
Cranston, Mr. John, Hereford.  
Cooling, Mr. Edwin, Derby.  
Campbell and Son, Messrs., Dublin.  
Chater, Mr. W., Saffron Walden.  
Chater, Mr. J. J., Cambridge.  
Casbon and Son, Messrs., Peterborough.  
Cattell, Mr. J., Westerham.  
Coppin, Mr. H., Shirley.  
Christie, J. D. and H., Messrs., Leatherhead.  
Dickson and Sons, Messrs. F. and A., Chester.  
Dickson and Sons, Messrs. J., Chester.  
Downie, Laird, and Laing, Messrs., Forest Hill.  
Dewar, Mr. H., Newcastle-on-Tyne.  
Draycott, Mr. W., Leicester.  
Day, Mr. J., Dartford.

Edwards, Mr. P., Dublin.  
Ewing, Mr. J. W., Norwich.  
Fairbairn, Mr. E. F., Carlisle.  
Francis, Mr. E. P., Hertford.  
Fletcher, Mr. W., Chertsey.  
Fisher, Holmes and Co., Messrs., Handsworth.  
Fraser, Mr. J., Lea Bridge.  
Godwin and Son, Messrs., Ashbourne.  
Gadd and Son, Messrs., Worthing.  
Gilbert, Mr. J., Ipswich.  
Henderson and Son, Messrs. E. G., St. John's Wood.  
Hollamby, Mr. E., Tunbridge Wells.  
Haynes, Mr. R., Henwick.  
House, Mr. J., Peterborough.  
Ireland, Mr. J., Barnstaple.  
Jackman and Son, Messrs., Woking.  
Jenkinson and Son, Messrs., Newcastle.  
Knight, Mr. W., Hailsham.  
Keynes, Mr. J., Salisbury.  
Low and Co., Messrs. Hugh, Clapton.  
Lucombe, Pince and Co., Messrs., Exeter.  
Leicester, Mr. C., Macclesfield.  
Lane & Sons, Messrs., Berkhamstead.

Marsh and Perkins, Messrs., Northampton.  
Mitchell, Mr. J., Piltown.  
Mann, Mr. J., Brentwood.  
Martin, Mr. F., Hull.  
Osborn and Sons, Messrs., Fulham.  
Paul and Son, Messrs., Cheshunt.  
Paul, Mr. W., Waltham Cross.  
Perkins and Son, Messrs., Coventry.  
Prince, Mr. G., Oxford.  
Pettitt, Mr. R., Bury St. Edmunds.  
Rea, Mr. R., Ipswich.  
Saltmarsh and Son, Messrs., Chelmsford.  
Smith, Mr. R., Worcester.  
Stuart and Mein, Messrs., Kelso.  
Smith, Messrs. F. and A., Dulwich.  
Small and Son, Messrs., Ilkestone.  
Smith, Mr. Chas., Guernsey.  
Veitch and Sons, Messrs., Chelsea.  
Veitch, Mr. R. T., Exeter.  
Van Houtte, Mr. Louis, Ghent.  
Wood and Son, Messrs., Maresfield.  
Warner, Mr. Thos., Leicester.  
Williams, Mr. B. S., Holloway.  
Walton, Mr. H., Edgend, Marsden.

**ROBERT WARD, The Rosery, Ipswich.**



## SPRING CATALOGUE.

CHARLES TURNER'S Descriptive List of Bedding and other Plants, Florist Flowers, New Roses, etc., is now ready, and may be had on application. The three beautiful new Nosegay Geraniums, Duchess of Sutherland, Lady Constance Grosvenor, and International, will be ready in May, price Five Shillings each.

THE ROYAL NURSERIES, SLOUGH.

### FLOWERING PLANTS OF AUCUBA JAPONICA VERA MASCULA.



## MESSRS. JAMES VEITCH AND SONS

HAVING NOW COMING INTO FULL FLOWER A QUANTITY OF

### MALE PLANTS OF THE TRUE GREEN AUCUBA JAPONICA,


RAISED FROM SEED IMPORTED DIRECT FROM JAPAN,

Beg to offer them at the following low prices:—

First Size, 7s. 6d. each.

Second Size, 5s. each.

Each Plant has a fine Spike of Bloom, and will impregnate a great number of Female Plants.

 The usual Discount to the Trade, with One Plant over when Six are taken.

ROYAL EXOTIC NURSERY, CHELSEA, S.W.

PRICE SIXPENCE.

## THE GARDENER;

A Monthly Magazine of Horticulture and Floriculture. Edited by WILLIAM THOMSON, Dalkeith Gardens, Author of 'A Practical Treatise on the Cultivation of the Grape-Vine,' assisted by a Staff of Practical Gardeners.—Yearly subscription, 6s.; or free by post, 7s., payable in advance.

Fourth Edition, price 5s.

### A PRACTICAL TREATISE ON THE CULTIVATION OF THE GRAPE-VINE.

By WILLIAM THOMSON, Gardener to his Grace the Duke of Buccleuch, K.G., etc., Dalkeith Park.

Lately published, price 5s.

### A PRACTICAL TREATISE ON THE CULTURE OF THE PINE-APPLE.

By DAVID THOMSON, Archerfield Gardens, N.B.

WILLIAM BLACKWOOD AND SONS,

37, PATERNOSTER ROW, LONDON; AND 45, GEORGE STREET, EDINBURGH.

#### IMMEDIATE RELIEF TO

ASTHMA, CONSUMPTION, INFLUENZA, COUGHS, COLDS,  
And all Disorders of the Breath, Throat, and Lungs,  
is ensured by



Which have a most agreeable taste.

CURES OF COUGHS, COLDS, AND ASTHMA.

"From Mr. William J. Dale, Chemist, 65, Queen Street, Portsea.

"From the immense sale I have had of Dr. Locock's Wafers throughout this populous locality, I must do you the justice to say that I consider them invaluable for coughs, colds, asthma, etc., and the overflowing testimony I have voluntarily received from all classes who have benefited by their virtues, fully warrants me in stating the above.—W. J. DALE."

TO SINGERS AND PUBLIC SPEAKERS DR. LOCOCK'S WAFERS are invaluable. They increase the flexibility, power, and clearness of the voice, remove hoarseness, and give great strength to the throat in resisting colds. Price 1s. 1½d., 2s. 9d., and 4s. 6d. per box. Sold by all Chemists.

#### INDIGESTION AND BILE.

*The only effectual and pleasant-tasting*

Stomachic Aperient and Antibilious Medicine

IS

DR. LOCOCK'S

### EXCELSIOR WAFERS.

*It acts promptly, tastes delightfully, and  
requires no restraint in diet or habits.*

Sold at 1s. 1½d., 2s. 9d., and 4s. 6d., by all Druggists, and by the Proprietors' Agents, Da Silva and Co., 26, Bride Lane, Fleet Street, London, E.C.



# MR. HARDWICKE'S PUBLICATIONS.

## *Popular Science Review, No. 23, April, price 2s. 6d.,*

Contains—Recent Discoveries in Insect Development. By H. E. FRIPP, M.D. Coloured Illustration.—On the Struggle for Existence amongst Plants. By J. D. HOOKER, M.D., F.R.S.—How to Study Meteorology. By G. F. CHAMBERS. Illustrated.—On Sensitive Flames. By W. F. BARRETT. Illustrated.—Paraffin Lamps and their Dangers. By JOHN ATTFIELD, Ph.D., F.C.S. Flint Flakes of Devon and Cornwall. By SPENCE BATE, F.R.S. Illustrated.—Reviews of Books—Summary of Scientific Progress, etc.

## *Hardwicke's Science Gossip, No. 28, April, price 4d.,*

Contains—How to Study Natural History. By Professor HUXLEY, F.R.S.—Mosquitoes. By J. K. LORD, F.Z.S. Illustrated.—Skeleton of the Purple Urchin—Hardy Foreign Ferns, Illustrated—Rural Natural History—Stickleback in Salt Water—Black Spider in Jamaica—Rose Chafer—Value of the Starling to the Farmers—Ancient Names of Plants—Hints to Object-Mounters—Ancient Nuts—Bird Slaughter—Cleaning Reflectors—Drilling Glass—Halo round Shadow—Aquarium Pests, and a vast store of interesting information to Naturalists.

## *At Home in the Wilderness ;*

Or, Personal Experience of Life and Adventure in Getting Along and Surmounting Difficulties in the Wilds of Uncivilized Man. By J. K. LORD, F.G.S. Crown 8vo, with numerous Illustrations. Price 6s.

### KNOTS, TIES, AND SPLICES.

## *The Book of Knots.*

Illustrated by 172 Examples, showing the manner of making every Knot, Tie, and Splice. Crown 8vo, cloth. Price 2s. 6d.

"It would be impossible to say too much in praise of the clear descriptions the author has given of complicated knots and fastenings, or of the admirable diagrams, that explain even more clearly than words, how all these intricate and curious ties and knots are managed."—LAND AND WATER.

## *On Diseases of the Stomach : Dyspepsia.*

By S. O. HABERSHON, M.D., F.R.C.P., Physician to Guy's Hospital, etc. Crown 8vo, cloth. Price 5s.

CONTENTS :—Dyspepsia from

Weakness  
Congestion  
Inflammation

Hepatic Dyspepsia  
Rheumatic and Gouty  
Renal

Mechanical  
Sympathetic  
Fermentative

Duodenal  
Ulcerative  
Cancerous.

## *The Wail of the Vatican :*

A Poem. By EDWARD SLATER. Revised Edition, fcap 8vo, cloth. Price 5s.

## *Holiday Excursions of a Naturalist.*

Forming a Guide-Book to the Natural History of the Inland and Littoral. Crown 8vo, cloth.

## *Hardwicke's Crown Peerage, 1867.*

Containing a Peerage, Baronetage, and Knightage, complete in one Volume, and giving the Birth, Accession, and Marriage of each Personage, his Heir (Apparent or Presumptive), Family Name, Political Bias, and Patronage ; as also a Brief Notice of the Offices which he has hitherto held, his Town Address, and Country Residences. By E. WALFORD, M.A., late Scholar of Balliol College, Oxford. Elegantly bound, with gilt edges. Price 5s.

### ALSO PUBLISHED ANNUALLY—

The Shilling Peerage.

The Shilling Baronetage.

The Shilling Knightage.

The Shilling House of Commons.

LONDON: ROBERT HARDWICKE, 192, PICCADILLY, W.



## NEW BOOKS.

## JUST PUBLISHED.

I.  
THE REIGN OF LAW. By the DUKE OF ARGYLL. Second Edition, post 8vo, price 12s.

"A very able book . . . and there are few works in which a thoughtful reader will find more that he will desire to remember."—*Times*.

II.  
FAMILIAR LECTURES ON SCIENTIFIC SUBJECTS. By Sir JOHN F. W. HERSCHEL, Bart. Second Edition, crown 8vo, price 6s.

"A book of a most profound and romantic scientific charm."—*Spectator*.

III.  
CHRIST AND CHRISTENDOM: being the Boyle Lectures for 1866. By E. H. PLUMTRE, M.A., Professor of Divinity, and Chaplain, King's College. Demy 8vo, price 12s.

IV.  
REMINISCENCES OF A HIGHLAND PARISH. By NORMAN MACLEOD, D.D., one of Her Majesty's Chaplains. Post 8vo, price 10s. 6d.

V.  
UNSPOKEN SERMONS. By GEORGE MACDONALD, M.A., Author of 'David Elginbrod,' etc. Crown 8vo, price 5s.

"A very large amount of true and beautiful thought, musically and eloquently expressed."—*Pall Mall Gazette*.

VI.  
OUR FATHER'S BUSINESS. By THOMAS GUTHRIE, D.D. Crown 8vo, price 3s. 6d.

VII.  
THE YEAR OF PRAYER: being Family Prayers for the Christian Year. By HENRY ALFORD, D.D., Dean of Canterbury. Sixth Thousand, crown 8vo, price 3s. 6d.

"A book that needs no recommendation."—*Athenæum*.

VIII.  
SIMPLE TRUTH SPOKEN TO WORKING PEOPLE. By NORMAN MACLEOD, D.D., one of Her Majesty's Chaplains. Small 8vo, price 2s. 6d.

"Robust, good sense."—*British Quarterly Review*.

IX.  
ESSAYS. By DORA GREENWELL, Author of 'The Patience of Hope.' Small 8vo, price 6s.

X.  
THE PHILOSOPHY OF THE CONDITIONED: SIR WILLIAM HAMILTON and JOHN STUART MILL. (Reprinted, with additions, from the 'Contemporary Review.') By the Rev. HENRY LONGUEVILLE MANSEL, B.D., Waynflete Professor of Philosophy, Oxford. Post 8vo, price 6s.

XI.  
HOW TO STUDY THE NEW TESTAMENT. Section I. The Gospels and the Acts of the Apostles. By HENRY ALFORD, D.D., Dean of Canterbury. Small 8vo, price 3s. 6d.

## NEARLY READY.

I.  
SCRIPTURE PORTRAITS AND OTHER MISCELLANIES, from the Writings of A. P. STANLEY, D.D., Dean of Westminster. Crown 8vo.

II.  
OUT OF HARNESS. By THOMAS GUTHRIE, D.D. Crown 8vo.

III.  
THE YEAR OF PRAISE: being Hymns, with Tunes, for the Sundays and Holydays of the Year. Edited by HENRY ALFORD, D.D., Dean of Canterbury; assisted in the Musical Part by the Rev. Robert Hake, M.A., Precentor, and T. E. Jones, Organist, of Canterbury Cathedral. Small crown 4to.

IV.  
THE TRAGEDIES OF SOPHOCLES: a New Translation. With a Biographical Essay. By E. H. PLUMTRE, M.A., Professor of Divinity, and Chaplain, King's College, London. A New and Revised Edition, complete in 1 vol., small 8vo.

ALEXANDER STRAHAN, 56, LUDGATE HILL.



# GROOMBRIDGE AND SONS' PUBLICATIONS.

- A LITTLE BOOK ABOUT LEARNING THE PIANOFORTE. By EMANUEL AGUILAR. Crown 8vo, cloth, 3s. 6d.
- DESK BOOK OF ENGLISH SYNONYMES. By JOHN SHERER. Small post 8vo, cloth, 3s. 6d.
- SEA FISHING AS A SPORT. By LAMBTON J. H. YOUNG. Crown 8vo, cloth, illustrated, 5s.
- TEN YEARS IN SWEDEN. By THE OLD BUSHMAN. 8vo, cloth, 16s.
- SPRING AND SUMMER IN LAPLAND. With Notes on the Fauna and Landscape of Luleå Lapmark. By THE OLD BUSHMAN. 8vo, cloth, 10s. 6d.
- TEMPLE ANECDOTES. First Volume, 'Invention and Discovery.' With 14 full-page Illustrations, cloth gilt, 5s.
- ENTERPRISE AND ADVENTURE. Being the Second Volume of 'The Temple Anecdotes.' With 14 full-page Illustrations, cloth gilt, 5s.
- HISTORY OF A SHIP from Her Cradle to Her Grave. By GRANDPA BEN. With 100 Engravings, cloth gilt, 3s.
- FOOTSTEPS TO FAME. By HAIN FRISWELL. Crown 8vo, cloth gilt edges, 3s. 6d.
- PICTURES IN A MIRROR. By W. MOY THOMAS. Crown 8vo, cloth, gilt edges, 3s. 6d.
- HOME INFLUENCE. A Tale for Mothers and Daughters. By GRACE AGUILAR. New Edition, Illustrated, cloth gilt, 5s.
- MAGNET STORIES, for Summer Days and Winter Nights. Cloth gilt, Illustrated, each volume, 2s. 6d.
- ROYAL CHILDREN. By JULIA LUARD. Fcap., cloth gilt, 5s.
- OUT AND ABOUT. By HAIN FRISWELL. Illustrated by GEORGE CRUIKSHANK. Fcap. 8vo, cloth gilt, 3s. 6d.
- DICTIONARY OF BOTANICAL TERMS. By the Rev. J. S. HENSLOW, M.A., late Professor of Botany in the University of Cambridge. Fcap. 8vo, cloth. With Illustrative Woodcuts, 4s.
- WAYSIDE WEEDS and Their Teachings. Botanical Lessons from the Lanes and Hedgerows. By SPENCER THOMSON, M.D. Crown 8vo, cloth. With 117 Illustrations, 5s.
- BEE-KEEPER'S MANUAL. By HENRY TAYLOR. 6th Edition, with 100 Engravings, cloth gilt, 4s.
- GARDENER'S RECEIPT BOOK. By WILLIAM JONES. 5th Edition, cloth gilt, 2s. 6d.
- NATURAL HISTORY OF CAGE BIRDS. By J. M. BECHSTEIN, M.D. 12mo, cloth gilt. With 70 Engravings, 3s. 6d.
- THE ROSE BOOK. By SHIRLEY HIBBERD, F.R.H.S. With numerous Illustrations. Crown 8vo, cloth gilt, 5s.
- PROFITABLE GARDENING. By SHIRLEY HIBBERD, F.R.H.S. With Illustrations. Post 8vo, cloth, 3s. 6d.
- BOOK OF THE AQUARIUM. By SHIRLEY HIBBERD, F.R.H.S. With Illustrations. Fcap. 8vo, cloth, 3s. 6d.
- THE UTILIZATION OF MINUTE LIFE. By Dr. T. L. PHIPSON, F.C.S. Crown 8vo, cloth, with numerous Illustrations, 6s.
- ENGLAND'S WORKSHOPS. Post 8vo, cloth, 5s.
- TELESCOPE TEACHINGS. By the Hon. Mrs. WARD. Illustrated with Coloured Plates. Cloth gilt, 7s. 6d.
- MICROSCOPE TEACHINGS. By the Hon. Mrs. WARD. Illustrated with Coloured Plates. Cloth gilt, 7s. 6d.
- OBJECTS FOR THE MICROSCOPE. By L. LANE CLARKE. Small 8vo, cloth, 3s. 6d.
- MARVELS OF POND LIFE. By HENRY J. SLACK. Post 8vo, cloth, Illustrated, 5s.

EPITOME OF HORTICULTURAL INFORMATION DURING THE LAST TEN YEARS.  
IMPORTANT REDUCTION IN PRICE.

The Eight Volumes, forming the First Series of

## THE FLORAL WORLD AND GARDEN GUIDE,

Are now to be had in Sets while the Remainder lasts.

Elegantly bound in Four Volumes, cloth gilt edges, price 24s., with numerous Illustrations.

The careful Editorship of SHIRLEY HIBBERD, Esq., F.R.H.S., aided by the Contributions of our most celebrated Horticulturists, renders THE FLORAL WORLD AND GARDEN GUIDE a most complete and valuable addition to the Library of every Country House. The Illustrations are for the most part confined to practical subjects, such as Plans for Laying out Gardens, the Arrangement of Colours, Implements, New Inventions, and Novelties in Floriculture; while a reference to the carefully-prepared Indexes, which accompany each volume, will, at a glance, display the care with which the whole range of Horticultural Subjects has been treated. The work, indeed, embracing, as it does, every topic of interest to Lovers of the Garden, cannot fail to be preserved as one of the best Records in existence in relation to the Garden Literature of the past Ten Years.

\*\*\* Order THE FLORAL WORLD AND GARDEN GUIDE, First Series, Eight Volumes bound in Four, cloth, gilt edges, price 24s. (only sold at this price in sets).

London: GROOMBRIDGE AND SONS, 5, Paternoster Row.



## NEW WORKS JUST PUBLISHED.

**SUNSHINE AND SHOWERS;** Their Influences throughout Creation. A Compendium of Popular Meteorology, Curiosities of the Weather, and Weather Wisdom. By ANDREW STEINMETZ, Esq. Crown 8vo, cuts, 7s. 6d.

"The author has explained the subjects with a fulness never before attempted, and has introduced a variety of practical suggestions which will be useful to all classes of readers. . . . The book is written with much cleverness, and is calculated to amuse as well as instruct."—*Observer*.

**THE REASONING POWER IN ANIMALS.** By the Rev. J. S. WATSON. Crown 8vo, 9s.

"Full of entertainment, of instruction, and of matter suggestive of thought on that strange world of utterly mysterious life with which we come into daily contact, but of the essence of which we know scarcely anything."—*Daily News*.

**METEORS, AEROLITES, AND FALLING STARS.** By Dr. T. L. PHIPSON. Crown 8vo, Woodcuts and Lithographic Frontispiece, 6s.

"Well calculated to repay perusal. Dr. Phipson has brought together, in a condensed, but by no means a dry form, a great number of interesting facts and a large amount of reasoning, which carries with it, in most cases, the conviction that his views are correct."—*Scientific Review*.

Dedicated, by Special Permission, to H.R.H. FIELD-MARSHAL THE DUKE OF CAMBRIDGE.

**LIVE COALS;** or, Faces from the Fire. By Miss BUDGEN, "Acheta," Author of 'Episodes of Insect Life,' etc. Royal 4to, with 35 Original Sketches beautifully printed in colours, £2. 2s. Comprising a Series of Thirty-five highly Imaginative and Humorous Sketches, suggested by Burning Coals and Wood, accompanied by Essays, descriptive and discursive, on The Imagery of Accident—The Fire in a New Light—The Fire an Exhibitor—The Fire a Sculptor.

## NATURAL HISTORY.

**MONOGRAPH OF ODONTOGLOSSUM.** By JAMES BATEMAN, Esq. Part IV., Imp. folio. 5 coloured plates, £1. 1s. CONTENTS: *Odontoglossum Læve*, *Odontoglossum Luteo-purpureum*, *Odontoglossum Bictoniense*, *Odontoglossum Alexandræ*, *Odontoglossum Maculatum*.

**SECOND CENTURY OF ORCHIDACEOUS PLANTS.** By JAMES BATEMAN, Esq. Part VII., royal 4to, 10 coloured plates, 10s. 6d. CONTENTS: *Renanthera Lowii*, *Trichopilia Turialvæ*, *Epidendrum Myrianthum*, *Pilumna Fragens*, *Oncidium Longipes*, *Dendrobium Eburneum*, *Odontoglossum Cordatum*, *Phalænopsis Lowii*, *Dendrobium Bigibbum*, *Orchis Foliosa*.

**THE BOTANICAL MAGAZINE.** Edited by Dr. HOOKER, Third Series, No. 268, April, 6 coloured plates, 3s. 6d. CONTENTS: *Saccolabium Giganteum*, *Cordyline Australis*, *Tinnea Æthiopica*, *Dictyopsis Thunbergii*, *Dombeya Mastersii*.

**THE FLORAL MAGAZINE.** Edited by the Rev. H. HONYWOOD DOMBRAIN. No. 84, April, 4 coloured plates, 2s. 6d. CONTENTS: *Iresine Herbstii Aureo-reticulata*, *Pelargoniums Archbishop* and *Negress*, *Lælia Albida* var. *Rosea*, *Tapeinotes Carolinæ*.

**HANDBOOK OF THE NEW ZEALAND FLORA.** By Dr. HOOKER, F.R.S. Part I., 16s. Part II., 14s. Or complete in one volume, £1. 10s.

**FLORA AUSTRALIENSIS.** By G. BENTHAM, F.R.S. Vol. III., £1.

**HANDBOOK OF THE BRITISH FLORA;** a Description of the Flowering Plants and Ferns indigenous to, or naturalized in, the British Isles. For the Use of Beginners and Amateurs. By GEORGE BENTHAM, F.R.S., President of the Linnean Society. *New Edition.* Crown 8vo, 12s.

**THE ILLUSTRATED BRITISH FLORA;** a Description (with a Wood Engraving, including Dissections, of each Species) of the Flowering Plants and Ferns indigenous to, or naturalized in, the British Isles. By G. BENTHAM, F.R.S. Demy 8vo, 2 vols., 1295 Wood-Engravings, from Original Drawings by W. FITCH, £3. 10s.

**BRITISH SPIDERS;** an Introduction to the Study of the ARANEIDÆ of Great Britain and Ireland. By E. F. STAVELEY. Crown 8vo, 16 Plates, drawn expressly for the work, by TUFFEN WEST, containing Coloured Figures of nearly 100 Species, 10s. 6d.

**BRITISH BEES;** an Introduction to the Study of the Natural History and Economy of the Bees indigenous to the British Isles. By W. E. SHUCKARD. Crown 8vo, 16 Coloured Steel Plates, containing nearly 100 Figures, engraved from Natural Specimens expressly for the work, by E. W. ROBINSON, 10s. 6d.

**BRITISH BEETLES;** an Introduction to the Study of our Indigenous COLEOPTERA. By E. C. RYE. Crown 8vo, 16 Coloured Steel Plates, comprising Figures of nearly 100 Species, engraved from Natural Specimens expressly for the work, by E. W. ROBINSON, 10s. 6d.

**BRITISH FERNS;** an Introduction to the Study of the Ferns, Lycopods, and Equiseta indigenous to the British Isles. With Chapters on the Structure, Propagation, Cultivation, Diseases, Uses, Preservation, and Distribution of Ferns. By MARGARET PLUES. Crown 8vo, 16 Coloured Plates, drawn expressly for the work, by W. FITCH, and 56 Wood-Engravings, 10s. 6d.

## FOR SALE.

**THE BOTANICAL MAGAZINE.** First and Second Series complete, with Index. Price £38. Apply to REEVE and Co., 5, Henrietta Street, Covent Garden.

REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.



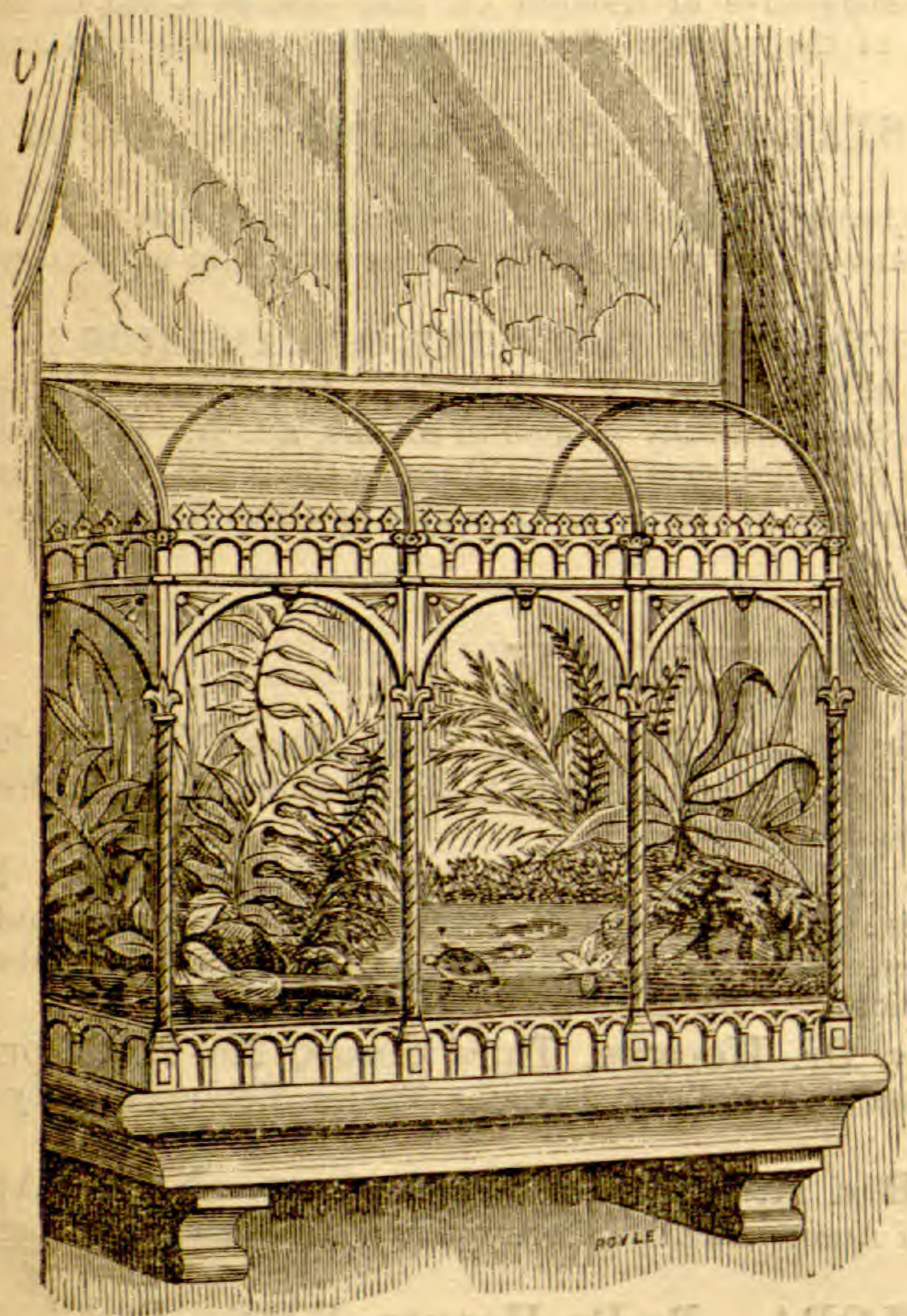
# BARR AND SUGDEN,

## THE METROPOLITAN SEED, BULB, AND PLANT WAREHOUSE,

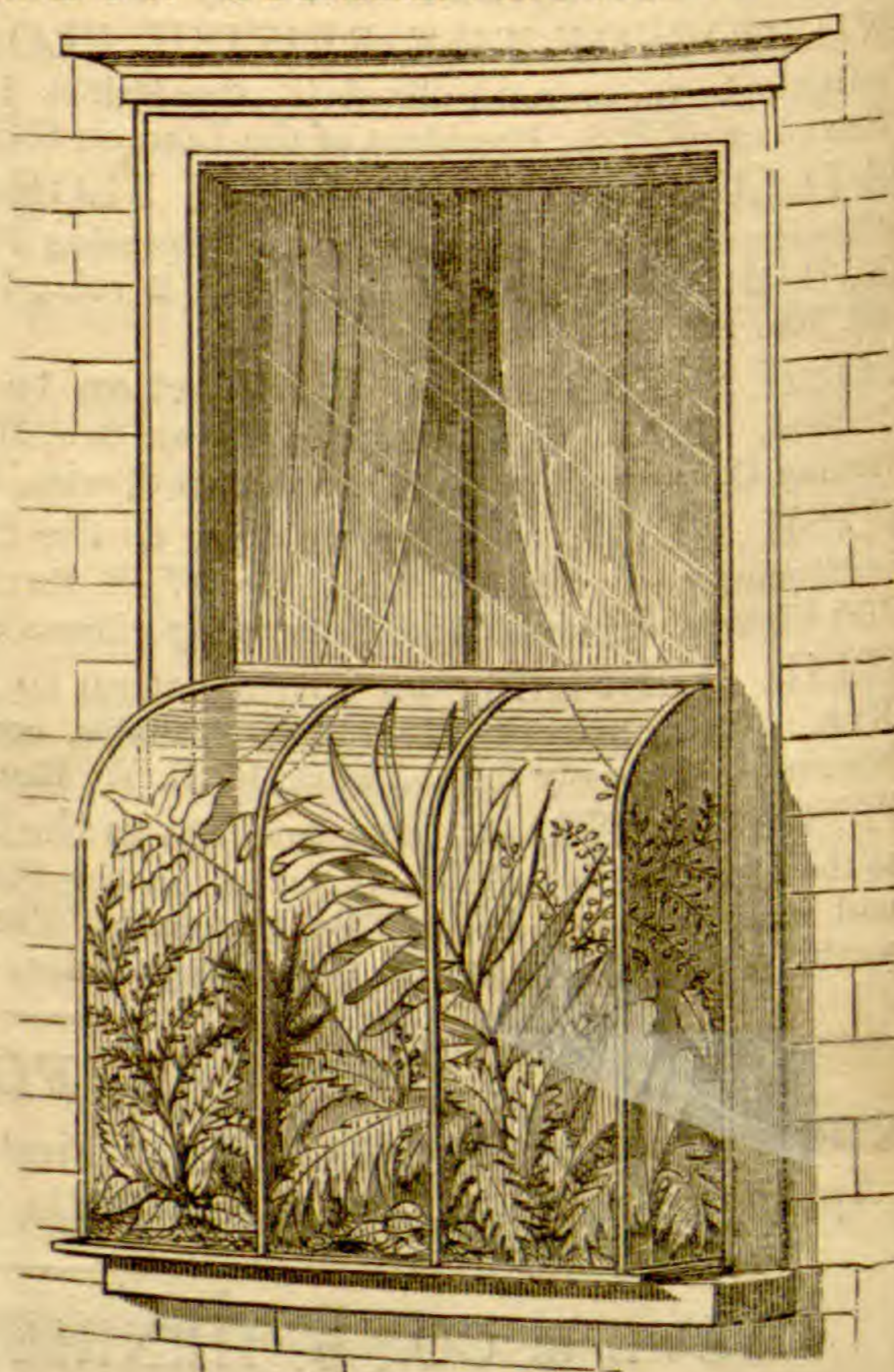
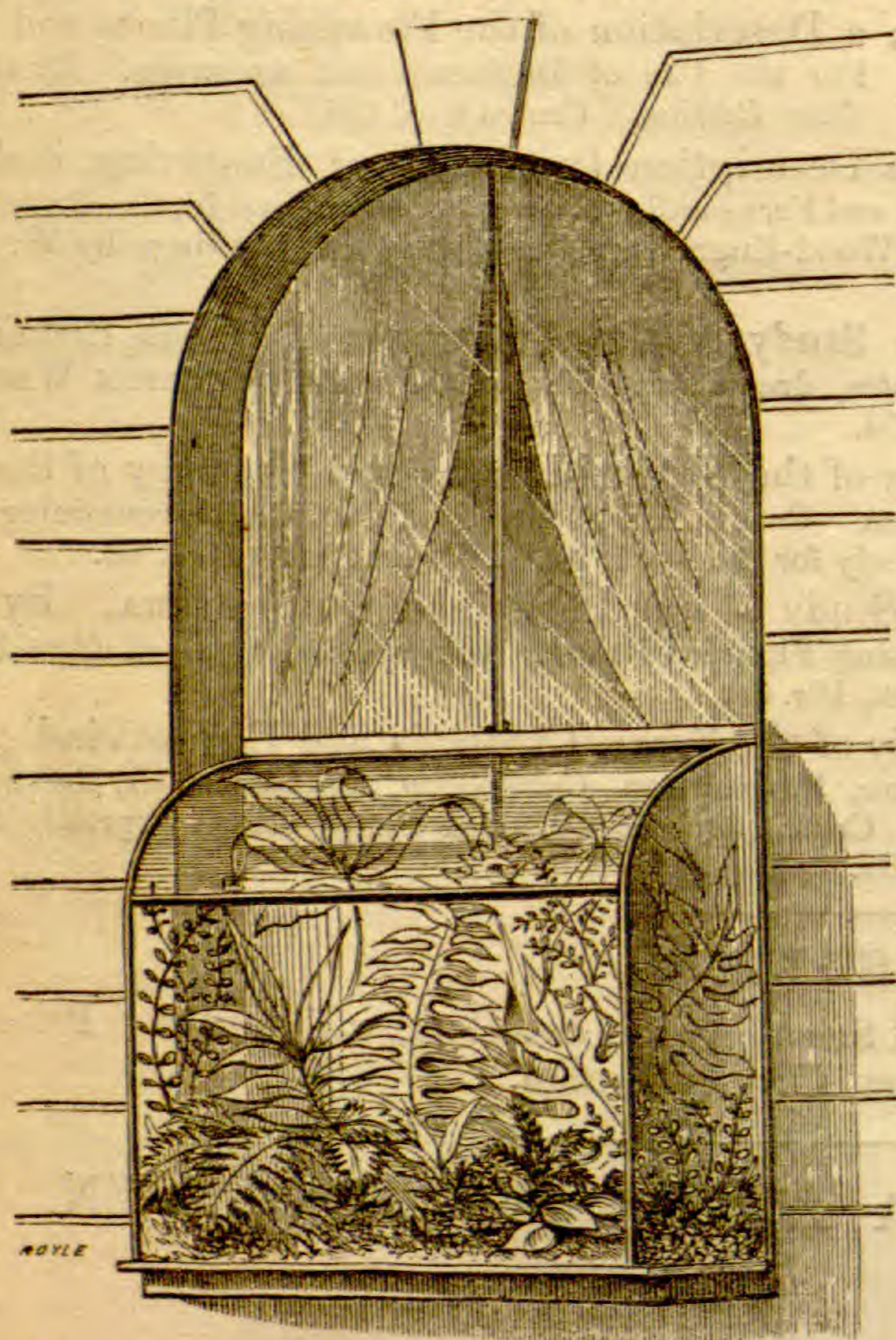
12, KING STREET, COVENT GARDEN, W.C.

*Copies of the Guide to Flower and Kitchen Garden sent free to intending purchasers.*  
Foliage Plants and Drawing-Room Elegancies for the London Season.

### BARR AND SUGDEN'S NEW WINDOW FERNERIES.



### BARR AND SUGDEN'S NEW WINDOW CONSERVATORIES.









SACCOLABIUM GIGANTEUM.

*Gigantic Saccolabium.*

Nat. Ord. ORCHIDÆ.—GYNANDRIA MONANDIA.

*Gen. Char. (Vide supra, TAB. 5433.)*

SACCOLABIUM *giganteum*; foliis latissimis coriaceis crassis apice inæquali obtuse bilobis racemo densifloro subsecundo subæqualibus, sepalis cuneato-ovatis obtuse acutis, petalis angustioribus, labelli laminâ cum columnâ subparallelâ ob calcaris limbos laterales præruptos liberos cuneato-flabellatâ apice trifidâ, laciniis lateralibus semirhombeis, laciniâ mediâ ligulatâ crassâ retusâ haud productâ, lineis barbellatis geminis in basi utrinque in latus calcaris compressi cylindranei conici transcendentibus ibi sphincterem efficientibus, columnâ brevi reclinatâ, antherâ breve rostratâ, pollinibus sphericis breve stipitatis. *Rehb.*

SACCOLABIUM *giganteum*. *Wall.; Lindl. Gen. et Sp. Orch.* 221.

VANDA *densiflora*. *Lindl. Paxt. Fl. G. t.* 42. *Folia Orch. Vanda*, n. 22. *Gard. Chron.* 1866, 1194.

The honour of introducing this beautiful plant, as well as of having been the first to flower it, belongs to the Bishop of Winchester, in whose collection at Farnham Castle it made its appearance several years ago. Unfortunately the Bishop's plants were small, and the spikes produced—though sufficient to enable Dr. Lindley to recognize the species—gave but an imperfect idea of the noble aspect that it would eventually assume. The plant moreover is so exceedingly slow in its movements, that notwithstanding the generous anxiety of the Bishop to distribute it, a century might have elapsed before all the orchidians amongst her Majesty's subjects could have been supplied, had no further addition been made to the number of imported specimens. Happily however about a year ago a fresh supply of fine plants were received by Messrs. Veitch from Rangoon, having been sent to them by the gallant Colonel whose name will be worthily perpetuated in the Vanda (*V. Bensoni*), lately figured in this

APRIL 1st, 1867.



work. One of these flowered in the highest perfection in November last, when it was exhibited at one of the Tuesday Meetings of the Horticultural Society, exciting—as well it might—universal admiration. The flowers, which were more agreeably perfumed than those of *S. violaceum*, continued in beauty for nearly a quarter of a year. As to cultivation, patience rather than skill is required, —the main object being to obtain as large specimens as possible, for the racemes of flowers will be large in proportion.

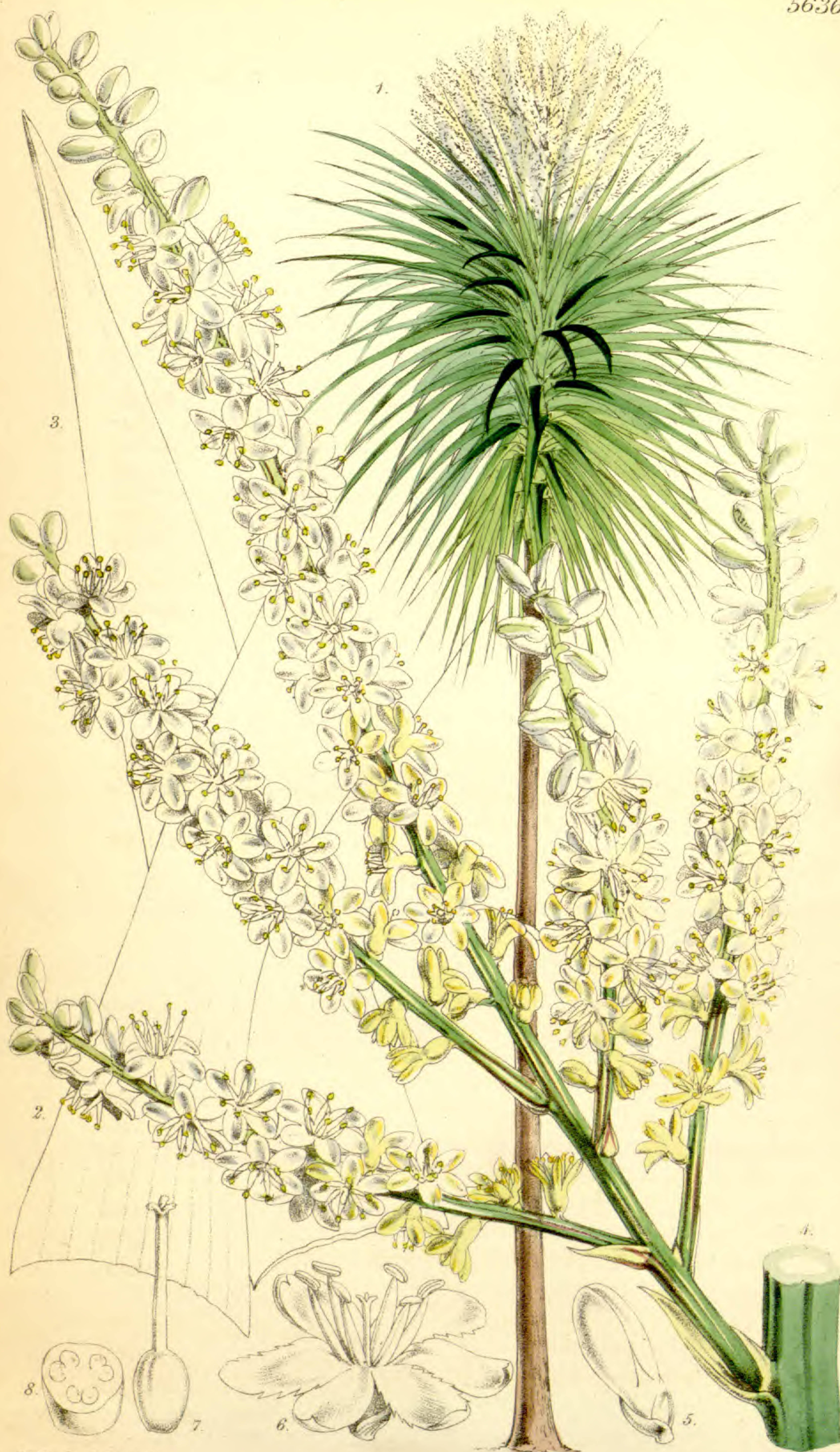
No doubt *S. giganteum* is very nearly related to *S. violaceum*; still it is unquestionably distinct from, and vastly superior to that species. “The chief difference,” as Professor Reichenbach observes in an able notice of the plant in the Gard. Chron., “is to be found in the shape, and, in consequence, in the nervation of the lip. The lip of *Saccolabium violaceum* is panduriform, retuse at the apex, with a tooth in the end. All the nerves run nearly parallel. Here the lip is tapering to the base, much dilated at the apex, where it is trifid, but not truncate, with a projecting tooth. Both species have a projecting callosity beneath the lip. Let us add, that the colours of *Saccolabium violaceum* have a more bluish hue, and that that species, bearing more blotches both on the sepals and petals, has a totally different appearance. *S. Harrisonianum* we regard as a splendid white variety of the last.”

DESCR. *Leaves* very broad and fleshy, streaked and channelled, irregularly bidentate or eroded at their extremity, from six inches to a foot long, about equal to the dense, many-flowered, nodding, subsecund racemes, that issue from the point of their junction with the stem. *Sepals* whitish, cuneate-ovate, obtusely acute, not so wide as the petals, which are of the same colour, with the addition of a few lilac spots. The lamella (or plate) of the *lip* is nearly parallel with the column, wedge-shaped, divided at its apex into three portions, of which those at the sides are semi-rhomboidal, while that in the middle is short and slightly retused, all these three portions being of the most lovely violet hue, while the remainder of the lip is the same tint as the sepals and petals; there are two hairy lines at the base of the lip, which, descending into the short spur, form a sort of sphincter for the round pedicellate *pollen-masses*. *Column* slightly bent backwards, with a short beak on the *anther*.—*J. Bateman*.

---

Fig. 1. Column and lip, seen sideways. 2. Front of lip :—*magnified*.







CORDYLINE AUSTRALIS.

*New Zealand Ti-tree.*

Nat. Ord. LILIACEÆ.—HEXANDRIA MONOGYNIA.

*Gen. Char.* Flores hermaphroditi. *Perianthium* campanulatum; foliola 6, persistentia, æqualia, patentia, basi breviter v. longius connata. *Stamina* 6, basi foliolorum perigonii inserta, filamentis subulato-filiformibus glabris; antheræ versatiles, oblongæ. *Ovarium* ovoideum v. obovoideum, obtuse 3-gonum, 3-loculare; stylus rectus, columnaris, stigmatibus 3-lobis; ovula in loculis pauca v. numerosa. *Bacca* subglobosa, 3-locularis, oligo- v. polysperma. *Semina* angulata, testa atra nitida. Arbores, rarius herbæ, sæpe elatæ. Folia apices versus trunci v. ramorum congesta, patentia, ensiformia, coriacea, nervis parallelis, costa obscura v. distincta. Paniculæ amplæ, exertæ v. nutantes, ramosissimæ, multifloræ. Flores albi v. cærulei, 3-bracteati, bractea intermedia 2-nervi, ceteris 1-nerviis.

CORDYLINE *australis*; caudice elato arboreo, demum ramoso, foliis ensiformibus, 2–3 ped. longis, 1½–2 poll. latis, supra basin paulo angustatis, nervis uniformibus numerosissimis striolatis, costa obscura, panicula erecta ramosissima, floribus albis confertis.

CORDYLINE *australis*. Hook. f. *Fl. Nov. Zeal.* v. 1. t. 257. *Gard. Chron.* 1860. p. 792. *Handbook of New Zeal. Flora*, 281 (non. Endl.).

DRACÆNA *australis*. Forst. *Prodr.* 151.

The history of the New Zealand and Australian *Cordylines* was long in a state of great confusion, which I attempted to clear up in the 'Gardeners' Chronicle' in 1860. I then showed that the *Dracæna australis* of Forster, which was undeterminable from that author's description, was, according to the figure in the Banksian Herbarium, not the plant so cited in this Magazine (Tab. 2835). I also showed that the Magazine plant, which was sent from the Sydney Botanical Garden, was most probably procured from Norfolk Island, whence I have dried specimens collected by A. Cunningham, so long the Superintendent of the Sydney Gardens.

I have now the pleasure of figuring what I believe to be the true *Dracæna australis* of New Zealand, the commonest

APRIL 1ST, 1867.



of four or six species that inhabit that group of islands, and a plant which could not well have escaped Forster's notice. It is a very handsome small tree, almost hardy in the west of England, quite so in the Scilly Islands, where Mr. Augustus Smith has flowered fine specimens in the open air. It often passed for *C. indivisa* in the nurseries, but that, as is now well known, is a totally different plant, with a much broader, yellow-green, strongly-veined leaf, and a drooping panicle of much larger flowers. The plant from which the accompanying drawing was made, flowered in the temperate house at Kew, in June, 1866.

DESCR. *Trunk* slender, twelve to twenty feet high, branching at the top when old. *Leaves* two to three feet long, ensiform, an inch and a quarter to two inches broad, slightly contracted above the base, with numerous fine, parallel, striated veins, and no obvious midrib, dark green. *Panicle* very large, erect, copiously branched. *Flowers* most abundant, crowded, white. *Perianth-tube* very short, limb spreading, one-third of an inch in diameter, inner segments toothed irregularly in the margin. *Berry* as large as a small pea, white, with black shining seeds.—*J. D. H.*

---

Fig. 1. Reduced figure of whole plant. 2 and 3. Base and apex of leaf. 4. Branch of panicle. 5. Bud. 6. Flowers. 7. Ovary. 8. Transverse section of do. Fig. 5-8, *magnified*.





W. Fitch, del. et lith.

Vincent Brooks, Imp.



TINNEA ÆTHIOPICA.

*Violet-scented Tinnea.*

Nat. Ord. LABIATÆ.—DIDYNAMIA GYMNOSPERMIA.

*Gen. Char.* Calycis 2-labiati tubus subenervis, ventricosus, verticaliter depressus, labiis planis subæqualibus integerrimis semi-orbicularibus. Corollæ tubus brevis, rectus, latiusculus, cylindricus, limbi verticaliter depressi 2-labiati labio superiore abbreviato 2-lobo, inferiore porrecto 3-lobo, lobis lateralibus parvis rotundatis intermedio multo majore suborbiculari emarginato. Stamina 4, filamentis basi barbellatis; antheræ inclusæ, parvæ, remiformes, filamento oblique adnatæ. Stylus gracilis, stigmatate inæqualiter 2-fido. Fructus . . .—Frutex erectus, ramosus, ramis teretibus cano-pubescentibus. Folia parva, petiolata, ovato-v. ovoideo-lanceolata, acuta v. subobtusata, integerrima. Verticillastra axillaria, pauciflora, pedunculata. Flores odori, majusculi, pedicellati, calyce viridi, corolla fusco-purpurea.

TINNEA æthiopica. Kotschy in '*Plantæ Tinneanæ*,' ined. cum tabula.

Amongst the more important scientific results of the late gallant explorations of Central Africa, has been a great accession to our knowledge of its previously little known flora; and for this we are indebted almost exclusively to three individuals—Dr. Kirk, during Livingstone's exploration of the Zambesi and Shire rivers and Lakes Shirwa and Nyassa; Captain Grant, during Captain Speke's and his own adventurous journey to the upper waters of the Nile; and Mdle. Tinne and Herr Heuglin, during their disastrous Nile voyage. Singularly enough, the beautiful plant here figured was found by all three expeditions, and I do not know to whom the merit of being its first discoverer belongs, though we owe to Mdle. Tinne the introduction of the plant, and the specimen here figured. Dr. Kirk gathered it on the Manganga hills, in October, 1862; and Captain Grant, in the Umyoso forest, in August of the same year; but where Mdle. Tinne's party, who collected it in 1863, found it, I do not know, their collections being at Vienna; and my late friend

APRIL 1ST, 1867.



Dr. Kotschy, the author of the hitherto unpublished work in which this plant is figured, is recently deceased.

*Tinnea* is a stove plant, of which seeds were sent home by Mdlle. Tinne's party, and were raised at Liverpool, by Mr. Sandbach, in 1865; and it is no less remarkable for the maroon-purple colour of its flowers, than for their delicious perfume of violets. It flowered copiously at Mr. Williams's Nursery at Holloway, and at Kew, last winter. The genus belongs to the division *Stachydeæ*, of the Order *Labiataæ*.

DESCR. A hoary bush, four to six feet high. *Stems* and *branches* erect, terete, ribbed, twiggy. *Leaves* on short slender pedicels, ovate, subacute or acute, quite entire, narrowed at the base; nerves faint. *Flowers* copiously produced in all the upper axils; in native specimens, arranged in terminal elongate spikes. *Peduncles* two- to three-flowered, bracteate. *Calyx* bright green, ventricose, depressed, two-lipped; the *lips* broad, transversely flattened, quite entire. *Corolla* dark maroon-purple, tube broad, little longer than the calyx; *limb* compressed horizontally, two-lipped, upper lip short, almost truncate, two-lobed, lower advanced, flattish, three-lobed, lateral lobes small rounded, middle large, orbicular, emarginate. *Stamens* four, with parallel filaments, bearded at the very base; *anthers* small, concealed under the upper lip, attached laterally to the filament, reniform, two-celled. *Style* slender.—J. D. H.

---

Fig. 1. Corolla laid open. 2. Ovary, style and stigma and disk :—both magnified.







TAB. 5638.

DICTYOPSIS THUNBERGII.

*Thunberg's Dictyopsis.*

Nat. Ord. SMILACEÆ.—HEXANDRIA MONOGYNIA.

*Gen. Char.* Flores hermaphroditi. Perianthium deciduum, tubuloso-campanulatum, limbo brevi 6-lobo, lobis recurvis 3-nerviis. Stamina 6, basi perianthii tubi inserta, filamentis inferne tubo adnatis, inclusis; antheræ oblongæ. Ovarium ovoideum, basi attenuatum, apice cum stylo columnari continuum, 3-loculare, stigmatibus capitato 3-lobo; ovula in loculis 2-4, 2-seriata. Bacca globosa, 3-locularis, oligosperma. Semina plano-convexa, testa coriacea, albumine copioso.—Herba glaberrima, scandens, foliosa, ramis gracillimis teretibus. Folia sessilia, ovata, acuminata, integerrima, basi rotundata v. cordata, costa tenui distincta, nervis lateralibus numerosis tenuibus, nervulis transversis pulcherrime reticulatis. Pedunculi simplices v. 3-chotome ramosi, axillares et terminales, pedicellis gracilibus sub calyce articulatis. Flores parvi, nutantes, albo-virescentes.

DICTYOPSIS *Thunbergii*. Harv. Gen. Cap. Pl. Ed. 2, ined.

RUSCUS reticulatus. Thunb. Prodr. Fl. Cap. 13. Willd. Sp. Pl. v. 4. p. 876.  
Kunth, Enum. Pl. v. 5. p. 276.

At Plate 5584 of the last volume of the Magazine, was figured a Cape climbing Liliaceous plant, of singular grace and beauty, so much resembling this in habit and general appearance, that it must strike every one as surprising that these plants have nothing whatever to do with one another; that they do not belong to the same natural family even; and that the apparently precisely similar leaves of the two are in the one case (that of the *Myrsiphyllum*) not leaves at all (as noticed under its description). The *Myrsiphyllum* is a Liliaceous plant, with six leaflets to the perianth, seeds with a black covering, and the apparent leaves are flattened leaf-like branches, growing from the axils of small scale-like true leaves. The *Dictyopsis* is a Smilaceous plant, with an entire tube to the perianth, seeds with a coriaceous pale testa, and true leaves without scales at their bases.

APRIL 1ST, 1867.



*Dictyopsis reticulata* is a most beautiful tender greenhouse climber, as graceful and as fitted for all decorative and ornamental purposes as *Myrsiphyllum*. It is a native of the eastern districts of South Africa, from Albany and Somerset (Mrs. Barber and Mr. Hutton) to British Kaffraria (Cooper) and the coast land of Natal (Dr. Sutherland).

DESCR. A slender, graceful, glabrous leafy climber. *Stems* and *branches* cylindric. *Leaves* sessile, ovate, acuminate, rounded or cordate at the base, with many parallel nerves, the central forming a distinct midrib, all finely reticulated with cross-nerves. *Peduncles* axillary and terminal, three- or more-flowered, sometimes paniculately branched. *Flowers* drooping, pedicelled; pedicels articulate. *Perianth* tubular-campanulate, green below, white above, limb of six reflexed lobes. *Stamens* six, filaments adherent to the sides of the base of the perianth-tube; anthers oblong. *Ovary* narrowed above and below; style columnar; stigma capitate, three-lobed; ovules two to four in each cell. *Berry* subglobose, half an inch in diameter. *Seeds* with a coriaceous coloured testa and copious albumen.—*J. D. H.*

---

Fig. 1. Flower. 2. The same laid open :—*both magnified.*





W. Fitch, del. et lith.

Vincent Brooks, Imp.



TAB. 5639.

DOMBEYA MASTERSII.

*Dr. Masters's Dombeya.*

Nat. Ord. STERCULIACEÆ.—MONADELPHIA PENTANDRIA.

*Gen. Char. (Vide supra, TAB. 5487.)*

DOMBEYA *Mastersii*; ramulis gracilibus foliis utrinque et inflorescentia pilis laxis molliter villosis, foliis gracile petiolatis late ovato-cordatis acuminatis angulatis sub-3-lobis serrato-dentatis 7-9-nerviis, pilis subtus ad nervos stellatis, stipulis lanceolatis?, corymbis gracile pedicellatis subsimplicibus multifloris ebracteatis, pedicellis filiformibus calycibusque patentim pilosis, bracteis lanceolatis sepalis reflexis consimilibus, petalis obovato-cuneatis valde obliquis uno latere producto acuto albis, staminibus 15, stylo gracili, stigmatibus filiformibus recurvis.

DOMBEYA angulata. *Masters in Gard. Chron. January, 1867, p. 14, non Cav.*

The beautiful plant here figured flowered in the Palm house at Kew in January of the present year, and was the subject of an interesting communication to the 'Gardeners' Chronicle' by Dr. Masters, who, besides deservedly eulogizing it for the elegance of its perfumed trusses of pure white flowers, adds some valuable observations on the morphology of the flowers, and a curious account of the action of the staminodes in the process of fertilization. The staminodes, he observes in the opening flower to curve downwards and outwards, so as to come into contact with the stamens, whose anthers open outwardly, and allow their pollen to adhere to them. Being thus provided with a freight of pollen, the staminodes uncoil, and bring their points to a level with the stigmata, which curl round them, and thus receive the pollen. Should this interesting observation be verified, it will prove a remarkable discovery, and proof of an arrangement for self-fertilization, as curious as any that Mr. Darwin has discovered for the contrary effect.

With regard to the correct nomenclature of this species

APRIL 1ST, 1867.



(of the introducer of which I find no record in the Gardens), it is certainly not *D. angulata*, which is well figured at Tab. 2905 of this work, and which has very broad bracts, pink flowers, and much less oblique petals; nor do I think it agrees with any Mauritian species; but it is identical with a tropical African one, of which there are specimens in the Hookerian Herbarium, collected in Abyssinia by Dr. Roth, and by Captain Grant on the banks of the Nile north of Chopeh, in November, 1862. It is further very nearly allied to, if not identical with *D. Schimperiana*, A. Rich., of Abyssinia, but that is a larger plant, with broader, more obtuse petals, and a longer staminal tube.

DESCR. Our plant is a small bush, from four to five feet high, sparingly branched, the branches slender, nearly glabrous; branchlets tomentose, with soft, spreading hairs. *Leaves* four to seven inches long, deeply cordate-ovate, acuminate, obscurely angularly lobed, rather sharply toothed, five- to nine-nerved, bright-pale-green, villous, with long hairs, on both surfaces, those on the nerves beneath stellate. *Peduncles* axillary, slender, about as long as the petioles, bearing a simple or rarely subcompound corymb. *Bracts* none at the base of the pedicels. *Pedicels* numerous, slender, one inch long, pilose, with soft, spreading hairs. *Flowers* pearly-white, one inch in diameter; bracts beneath the flowers lanceolate, as long as and similar to the sepals. *Sepals* narrow-lanceolate, one-third of an inch long. *Petals* very obliquely obovate-cuneate, produced at one side into an obtuse or acute point, white. *Stamens* fifteen, with pinkish filaments and a short tube; *staminodes* strap-shaped. *Style* slender, pilose at the base; stigmas filiform. *Ovary* very woolly.—*J. D. H.*

---

Fig. 1. Stamen and ovary. 2. Ovary:—*both magnified.*



*Just published, Crown 8vo, with Wood-engravings, price 7s. 6d.*

# SUNSHINE AND SHOWERS:

THEIR

INFLUENCES THROUGHOUT CREATION.

A COMPENDIUM OF

POPULAR METEOROLOGY.

BY

ANDREW STEINMETZ, Esq.,

OF THE MIDDLE TEMPLE, BARRISTER-AT-LAW,

AUTHOR OF 'A MANUAL OF WEATHER-CASTS,' ETC. ETC.

---

This Work not only treats fully all the leading topics of METEOROLOGY, but especially of the use of the HYGROMETER, for which systematic RULES are now for the first time drawn up. Among other interesting and useful subjects, are chapters on RAINFALL in England and Europe in general—WET AND DRY YEARS—*Temperature and Moisture with respect to the health of Plants and Animals*—The Wonders of Evaporation—Soil Temperature—The Influence of Trees on Climate and Water Supply—THE PROGNOSTICATION OF THE SEASONS AND HARVEST—The Characteristics and Meteorology of the Seasons—Rules of the Barometer—Rules of the *Thermometer* as a *Weather Glass*—POPULAR WEATHER-CASTS—ANEMOMETRY—and finally, *What becomes of the Sunshine*—and *What becomes of the Showers*.

---

REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.



# WORKS ON BOTANY.

**BENTHAM'S ILLUSTRATED BRITISH FLORA**; a Description (with a Wood-Engraving, including dissections, of each species) of the Flowering Plants and Ferns indigenous to, or naturalized in, the British Isles. 2 vols. 8vo. 1295 Wood-Engravings, from Original Drawings by W. FITCH. £3. 10s.

**BENTHAM'S HANDBOOK of the BRITISH FLORA**; a Description of the Flowering Plants and Ferns indigenous to, or naturalized in, the British Isles. For the Use of Beginners and Amateurs. 12s.

**MOORE'S FIELD BOTANIST'S COMPANION**; a Familiar Account, in the Four Seasons, of the most common of the Wild Flowering Plants of the British Isles. 24 Coloured Plates, by W. FITCH. 21s.

**BENTHAM'S OUTLINES of ELEMENTARY BOTANY**, as Introductory to Local Floras. 2s. 6d.

**HOOKE'S FLORA of NEW ZEALAND**; a Systematic Description of the Native Plants of New Zealand, and the Chatham, Kermadec's, Lord Auckland's, Campbell's, and Macquarrie's Islands. Part I., 16s. Part II., 14s., or complete in one vol., 30s. Published under the auspices of the Government of that colony.

**BENTHAM'S FLORA AUSTRALIENSIS**; A Description of the Plants of the Australian Territory. Vols. II. and III., 20s. each. Published under the auspices of the several Governments of Australia.

**GRISEBACH'S FLORA of the BRITISH WEST INDIAN ISLANDS**. 37s. 6d. Published under the auspices of the Secretary of State for the Colonies.

**BENTHAM'S FLORA HONGKONGENSIS**; a Description of the Flowering Plants and Ferns of the Island of Hongkong. With a Map of the Island. 16s. Published under the authority of Her Majesty's Secretary of State for the Colonies.

**HOOKE'S FLORA of TASMANIA**; Royal 4to, 2 vols. 200 Coloured Plates. £17. 10s. Published under the authority of the Lords Commissioners of the Admiralty.

**HOOKE on the FLORA of AUSTRALIA**, its Origin, Affinities, and Distribution. 10s.

**HOOKE'S RHODODENDRONS of SIKKIM-HIMALAYA**; being an account, Botanical and Geographical, of the Rhododendrons recently discovered in the Mountains of Eastern Himalaya, from Drawings and Descriptions made on the spot, by Dr. J. D. HOOKE, F.R.S. Folio, 30 Coloured Plates. £3. 16s.

**MOGGRIDGE'S FLORA of MENTONE**. Royal 8vo. Parts I. and II., each, 25 Coloured Plates, 15s.

**WOODS'S TOURIST'S FLORA**; Descriptive Catalogue of the Flowering Plants and Ferns of the British Islands, France, Germany, Switzerland, Italy, and the Italian Islands. 18s.

**HOOKE'S BRITISH FERNS**; Figures and Descriptions, with Analyses of the Fructification and Venation, of the Ferns of Great Britain and Ireland, systematically arranged. Royal 8vo, 66 Coloured Plates, £2. 2s.

**HOOKE'S GARDEN FERNS**; Figures and Descriptions, with Analyses of the Fructification and Venation, of a Selection of Exotic Ferns, adapted for Cultivation in the Garden, Hothouse, and Conservatory. Royal 8vo, 64 Coloured Plates, £2. 2s.

**HOOKE'S FILICES EXOTICÆ**; Figures and Descriptions of Exotic Ferns, chiefly of such as are cultivated in the Royal Gardens of Kew. Royal 4to, 100 Coloured Plates, £6. 11s.

**CHANTER'S FERNY COMBES**; a Ramble after Ferns in the Glens and Valleys of Devonshire. Second Edition. 8 Coloured Plates and a Map of the County, 5s.

**BERKELEY'S BRITISH MOSSES**, containing all that are known to be Natives of the British Isles. 24 Coloured Plates, 21s.

**BERKELEY'S BRITISH FUNGOLOGY**, containing Characters of above a Thousand Species of Fungi, and a Complete List of all that have been described as Natives of the British Isles. 24 Coloured Plates, 30s.

**BADHAM'S ESCULENT FUNGUSES of ENGLAND**, containing an Account of their Classical History, Uses, Characters, Development, Structure, Nutritious Properties, Modes of Cooking and Preserving, etc. New Edition. Edited by F. CURREY, F.R.S. 12 Coloured Plates, 12s.

**HUSSEY'S BRITISH MYCOLOGY**, comprising Figures and Descriptions of the Funguses of interest and novelty indigenous to Britain. Royal 4to. First Series, 90 Coloured Plates, £7. 12s. 6d.; Second Series, 50 Coloured Plates, £4. 10s.

**HARVEY'S PHYCOLOGIA BRITANNICA**; or, History of British Seaweeds, containing Coloured Figures, Generic and Specific Characters, Synonyms and Descriptions of all the Species of Algæ inhabiting the Shores of the British Islands. Royal 8vo, 4 vols., 360 Coloured Plates, £6. 6s.

**HARVEY'S SYNOPSIS of BRITISH SEA-weeds**. 5s.

**HARVEY'S PHYCOLOGIA AUSTRALICA**; a History of Australian Seaweeds, comprising Coloured Figures and Descriptions of the more characteristic Marine Algæ of the South Hemisphere. Royal 8vo, 5 vols., 300 Coloured Plates, £7. 13s.

**HARVEY'S NEREIS AUSTRALIS**; or, Algæ of the Southern Ocean. Imperial 8vo, 50 Coloured Plates, £2. 2s.



GREEN'S PATENT SILENS MESSOR,

OR

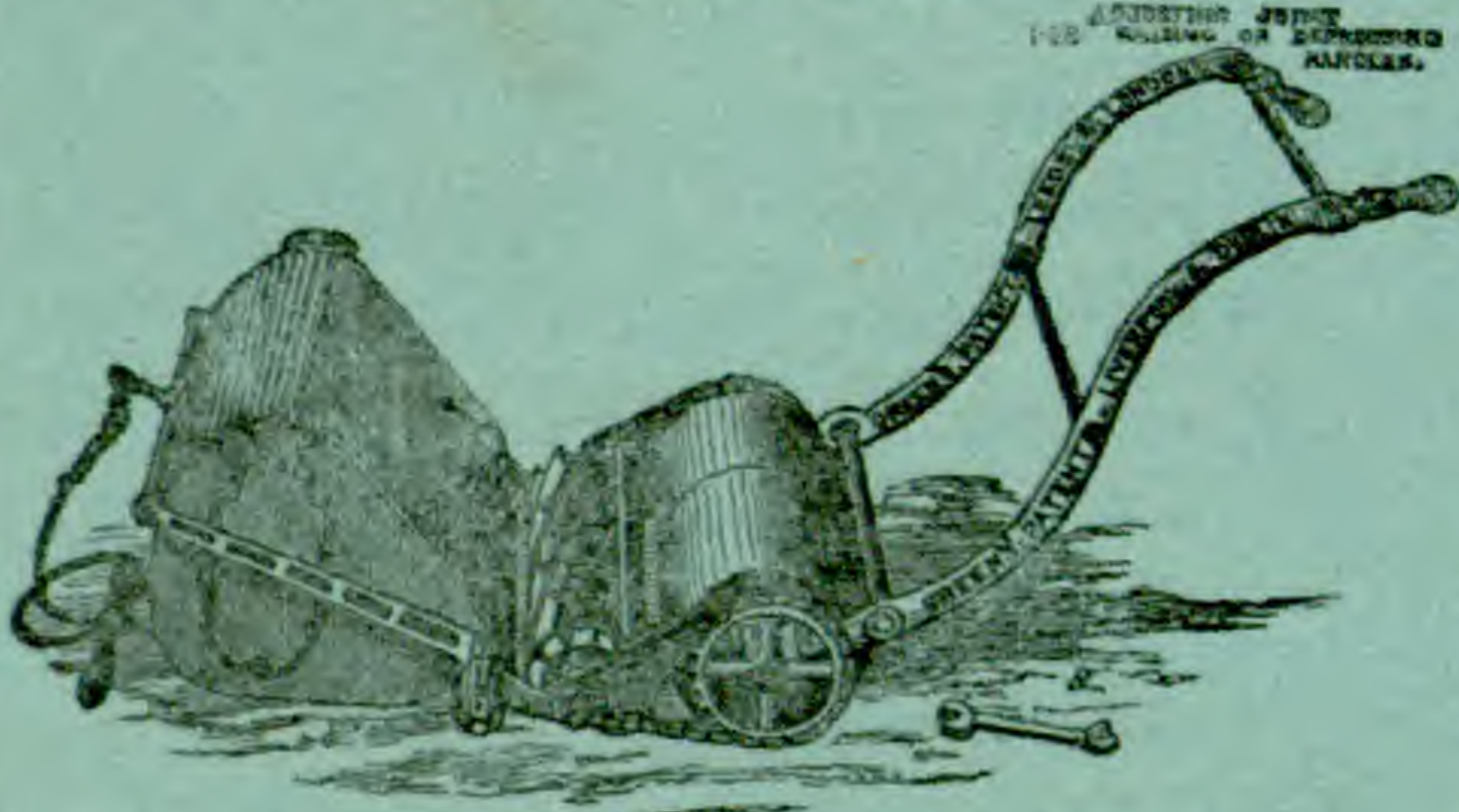
NOISELESS LAWN MOWING, ROLLING AND COLLECTING MACHINES.  
FITTED WITH PATENT SELF-SHARPENING CYLINDER CUTTERS.

By Special Appointment  
Sole Manufacturer



To Her Most Gracious  
Majesty the Queen.

Every Machine is warranted to give entire satisfaction, and if not approved of can be returned unconditionally.



Green's Patent Lawn Mowers have proved to be the best, and have carried off every prize that has been given in all cases of competition.

PRICES OF HAND MACHINES.

To cut 10 inches ... £3 10 0 ... Suitable for a Lady	To cut 18 inches ... £7 10 0 Suitable for one person
" 12 " ... 4 10 0 ... " "	" 20 " ... 8 0 0 Suitable for two persons
" 14 " ... 5 10 0 ... Suitable for one person	" 22 " ... 8 10 0 " "
" 16 " ... 6 10 0 ... " "	" 24 " ... 9 0 0 " "

Prices of Horse, Pony, and Donkey Machines, including patent self-delivery box; cross stay complete; suitable or attaching to ordinary chaise-traces or gig harness.

To cut 26 inches ... £13 0 0 ... } Leather Boots for	To cut 30 inches ... £21 0 0 } Leather Boots for
" 28 " ... 15 0 0 ... } Donkey, 18s.	" 36 " ... 24 0 0 } Pony, 22s.
" 30 " ... 17 0 0 ... }	" 42 " ... 27 0 0 } Leather Boots for
	" 48 " ... 30 0 0 } Horse, 26s.

The 26, 28, and 30 inches can easily be worked by a donkey, or by two men, on an even lawn, the 30 and 36 inches by a pony, and 42 and 48 inches by a carriage horse; and, as the Machines make no noise in working, the most spirited animal can be employed without fear of its running away, or in any way damaging the Machine.

Both the Horse, Pony, Donkey, and Hand Machines possess (over all other Makers) the advantages of self-sharpening: the cutters being steel on each side, when they become dull or blunt by running one way round the cylinder, can be reversed again and again, bringing the opposite edge of the cutter against the bottom blade, when the Machine will cut equal to new. Arrangements are made that the cylinder can be reversed, by any unexperienced person, in two or three minutes.

The above Machines are made from the best materials, and of superior workmanship; are delivered Carriage Free to all the principal Railway Stations and Shipping Ports in England.

GREEN'S IMPROVED NEW PATENT ROLLER,

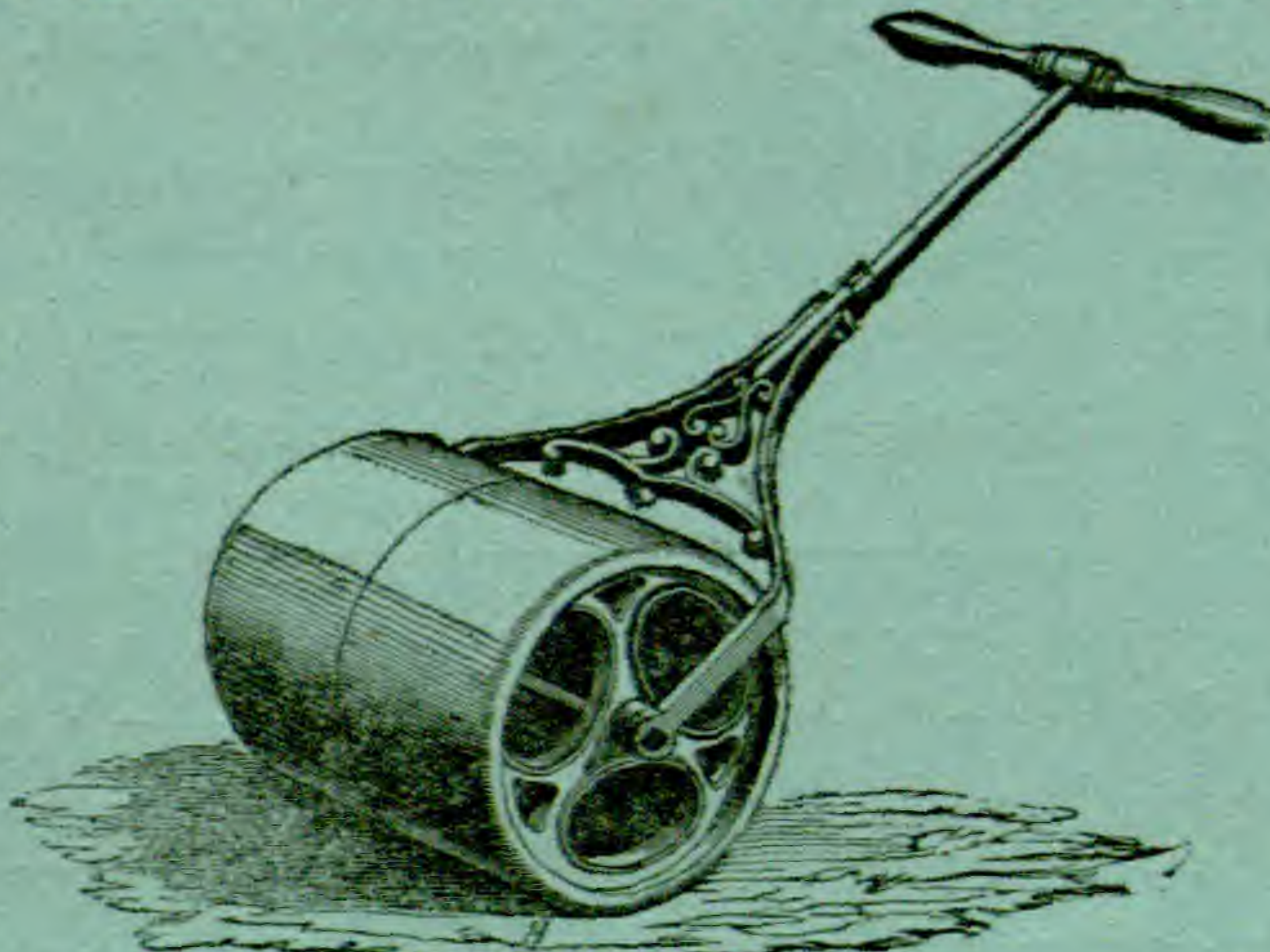
FOR

LAWNS, DRIVES, BOWLING GREENS, CRICKET FIELDS, AND GRAVEL PATHS.  
SUITABLE FOR HAND OR HORSE POWER.

PRICES OF  
HAND ROLLERS.

Delivered at the principal  
Railway Stations in England.

Diam. 30 in., len. 32 in. £7 10
" 24 " 26 " 4 10
" 20 " 22 " 3 10
" 16 " 17 " 2 15



PRICES OF  
ROLLERS FITTED WITH  
SHAFTS

Suitable for Pony or Horse  
Power.

Diam. 30 in., len. 32 in. £10 0
" 30 " 36 " 10 15
" 30 " 42 " 11 15
" 30 " 48 " 13 10
" 30 " 60 " 15 10
" 30 " 72 " 17 10
" 80 " 84 " 19 10

Thomas Green & Son, Smithfield Iron Works, Leeds; 44 & 45, Blackfriars Road, London, S.; and 19, Eden Quay, Dublin.



# HEATING BY HOT WATER.

---

It is now generally admitted that Buildings of any kind can be more effectually warmed by Hot Water than by any other means; but as so much depends on the way in which the Apparatus is fixed, it is of the greatest importance that it be done by experienced men.

J. JONES & SONS are prepared to estimate for Warming, to any extent—

GREENHOUSES.  
CONSERVATORIES.  
VINERIES.  
HOTHOUSES.  
FORCING PITS.  
PEACH HOUSES.  
PINE STOVES.  
ORCHARD HOUSES.

CHURCHES.  
CHAPELS.  
SCHOOLS.  
READING ROOMS.  
LECTURE ROOMS.  
BILLIARD ROOMS.  
HALLS AND PASSAGES.  
BATHS.

FACTORIES.  
OFFICES.  
WORKSHOPS.  
WAREHOUSES.  
DRYING ROOMS.  
CELLARS.  
COACH-HOUSES.  
HARNESS ROOMS.

J. JONES & SONS' Apparatus is simple in construction, moderate in cost, and economical in working.

It is equally available for the Amateur's Greenhouse, or the longest range of Forcing Houses; for the smallest Chapel or the largest Church; for Private Offices, or those of Public Companies.

It is admirably adapted for Dwelling Houses, as coils of pipes can be placed in any part, for warming the various rooms. One or more Baths may be heated from the same boiler, and a constant supply of hot water obtained in any part of the house.

For Warehouses and Workshops this system of heating is unsurpassed, as it is not only the means of keeping goods dry, but it also adds to the comfort of the workpeople, and thereby effects a saving in labour.

J. JONES & SONS recommend boilers of all kinds being set in brickwork, if possible; but portable boilers can be supplied, if required.

---

**MATERIALS.**—All Materials supplied will be of the best quality.

**DELIVERY.**—Boilers of various kinds, and pipes and connections, being always in stock, can, at a very short notice, be sent to any part.

**FIXING.**—The Fixing will be done by experienced men, fully capable of finishing properly any work they may undertake; and J. JONES & SONS are prepared to guarantee the effectual working of any apparatus fixed by their own men.

**ESTIMATES.**—Plans and Estimates will be sent on application.

---

**J. JONES & SONS,**  
**IRON MERCHANTS AND HORTICULTURAL ENGINEERS**  
6, BANKSIDE, SOUTHWARK, LONDON, S.E.



Third Series.

No. 269.

VOL. XXIII. MAY.

[Price 3s. 6d. col<sup>d</sup>. 2s. 6d. plain.]

OR No. 964 OF THE ENTIRE WORK.

CURTIS'S  
BOTANICAL MAGAZINE,

COMPRISING

THE PLANTS OF THE ROYAL GARDENS OF KEW,  
AND OF OTHER BOTANICAL ESTABLISHMENTS IN GREAT BRITAIN,  
WITH SUITABLE DESCRIPTIONS;

BY

JOSEPH DALTON HOOKER, M.D., F.R.S. L.S. & G.S.,  
Director of the Royal Botanic Gardens of Kew.



~~~~~  
Nature and Art to adorn the page combine,  
And flowers exotic grace our northern clime.  
~~~~~

LONDON:  
REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.  
1867.



# SHANKS' NEW PATENT LAWN MOWERS FOR 1867

*Patronized on Five occasions, during the Season of 1864, by*  
**HER MAJESTY THE QUEEN,**

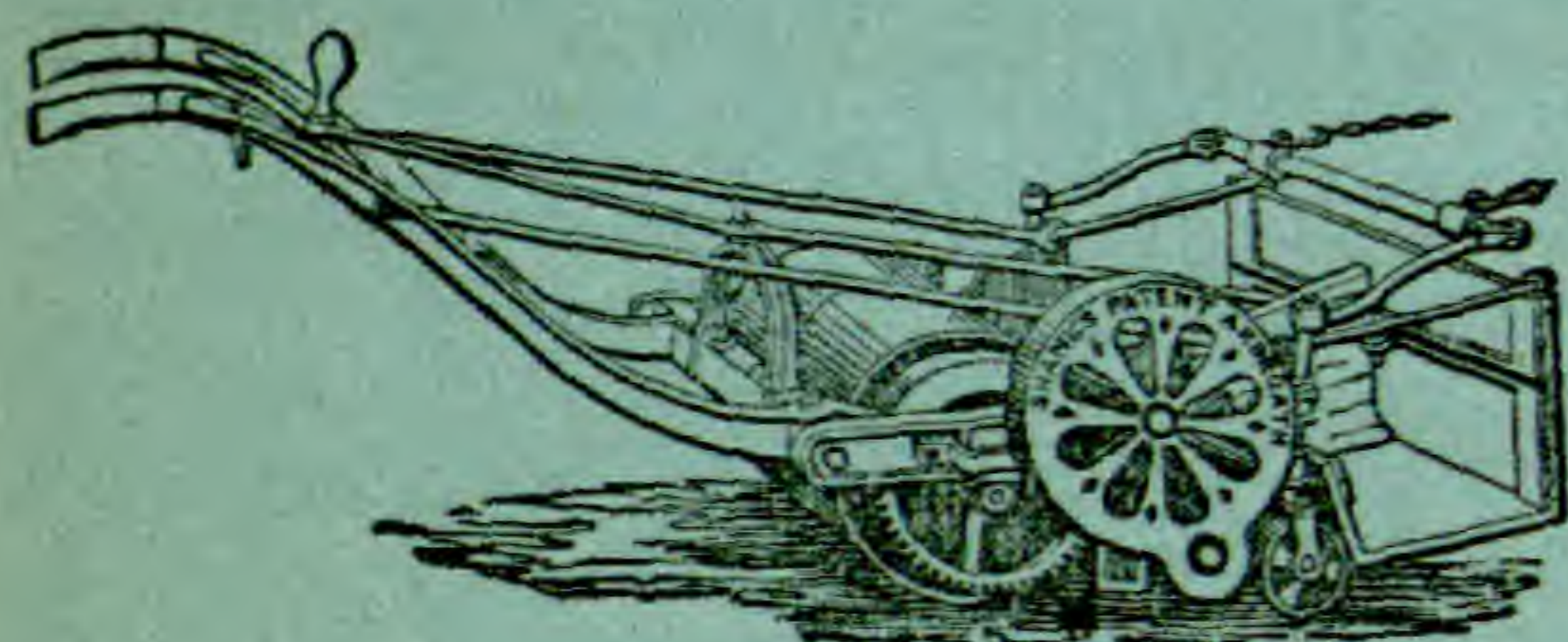
**AND ONCE BY HIS MAJESTY THE KING OF SAXONY;**

**DURING THE SEASON OF 1865 THEY WERE PATRONIZED ON FOUR OCCASIONS BY HER MAJESTY THE QUEEN;**

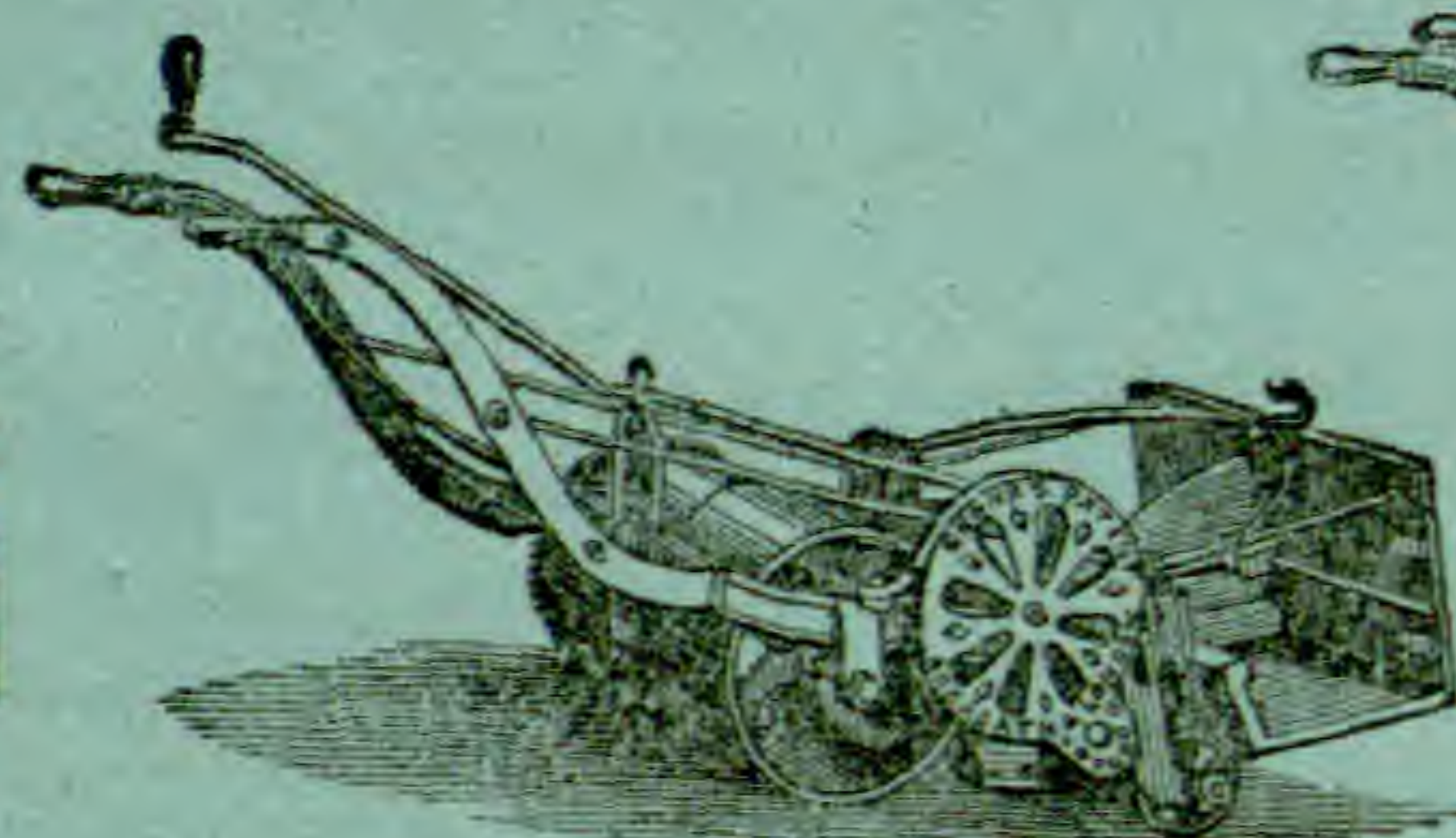
**ONCE BY HIS MAJESTY THE KING OF HOLLAND;**

**AND ONCE BY HIS MAJESTY THE KING OF PRUSSIA;**

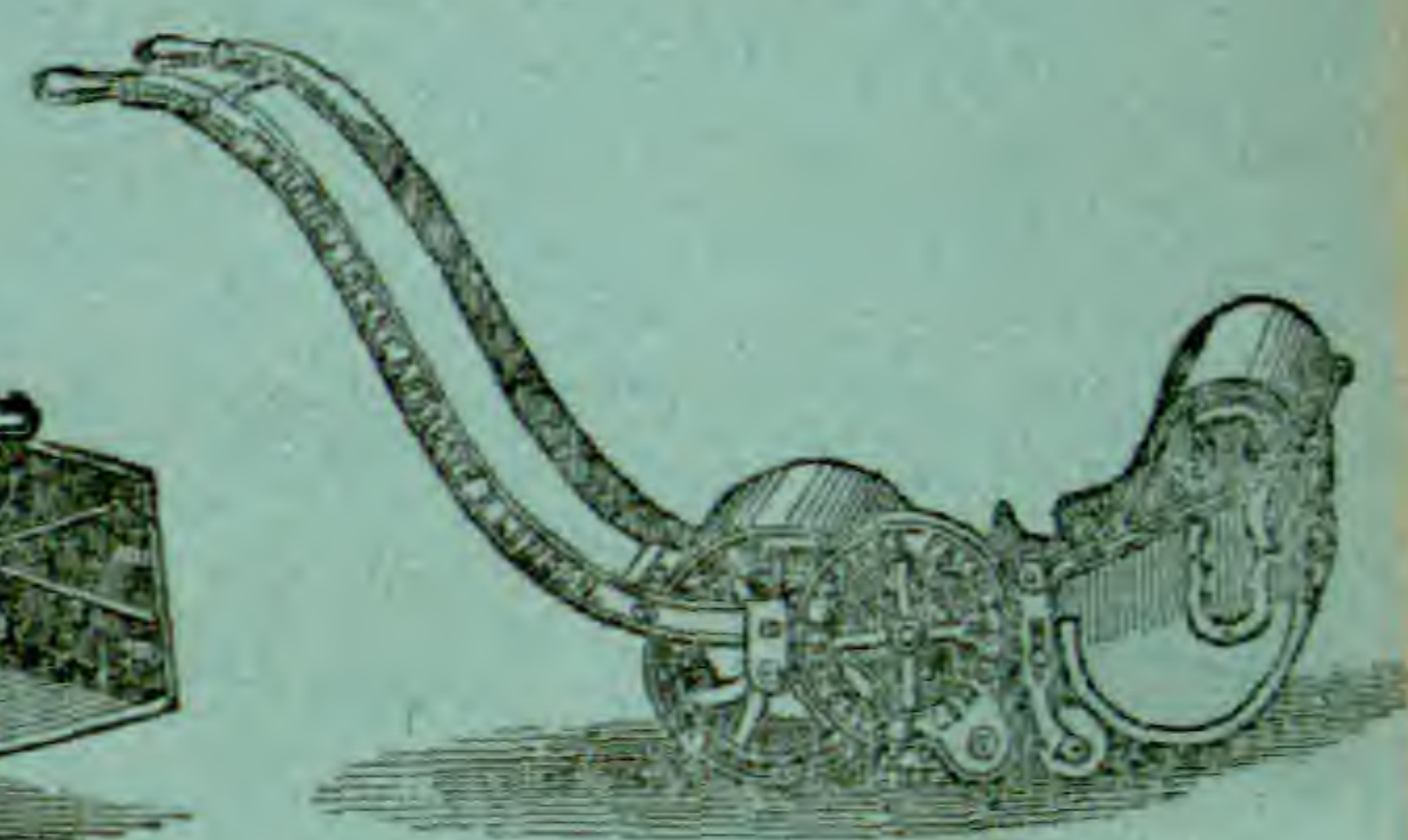
**AGAIN, DURING THE SEASON OF 1866, THEY WERE PATRONIZED ON FOUR OCCASIONS BY HER MAJESTY THE QUEEN.**



HORSE MACHINE.



PONY MACHINE.



HAND MACHINE.

ALEXANDER SHANKS & SON, in presenting their LAWN MOWERS for the Season of 1867, are gratified to be able to state that the demand for their celebrated Machines rapidly increases every year. The success which attended SHANKS' Machines during last Season is quite unparalleled in the history of the Lawn Mower.

A. S. & SON can confidently assure their numerous Friends and Customers and the Public generally that their endeavour will always be to supply a Machine, first-class in every way, one which cannot be surpassed if even equalled, whether for simplicity of construction, ease in working, or durability. None but the best materials and skilled workmen are employed in the manufacture of their Machines.

**PRICES**—Including Carriage to most of the principal Railway Stations and Shipping Ports in the Kingdom.

## SHANKS' NEW PATENT HAND MACHINE FOR 18.

10-inch Machine.....£3 10 0	} Easily worked by a Lady. Do. by a Boy. Do. by a Man.	19-inch Machine.....£7 12 6	{ Do. by a Man and a Boy. Do. by Two Men.
12-inch Machine.....4 10 0		22-inch Machine.....8 7 6	
14-inch Machine.....5 10 0		24-inch Machine.....8 17 6	
16-inch Machine.....6 10 0			

Silent Movement for the four smallest sizes, 4s. extra; for the other sizes, 7s. 6d. extra.

## SHANKS' NEW PATENT PONY & DONKEY MACHINE.

Width of Cutter.	If with Patent Delivering Apparatus.
25-inch Machine.....£12 10 0	25s. extra.
28-inch Machine.....14 10 0	30s. extra.
30-inch Machine.....15 15 0	30s. extra.

Silent Movement, 12s. 6d. extra.

## SHANKS' NEW PATENT HORSE MACHINE.

Width of Cutter.	If with Patent Delivering Apparatus.
30-inch Machine.....£19 0 0	30s. extra.
36-inch Machine.....22 0 0	30s. extra.
42-inch Machine.....26 0 0	40s. extra.
48-inch Machine.....28 0 0	40s. extra.

Silent Movement, 20s. extra.

SHANKS' PATENT LAWN MOWERS cut the Grass on uneven as well as on level Lawns; and it is quite immaterial whether the Grass be wet or dry.

*Every Machine warranted to give ample satisfaction, and if not approved of, can be at once returned.*

## ALEXANDER SHANKS & SON,

### 27, LEADENHALL STREET, LONDON.

### MANUFACTORY, DENS IRONWORKS, ARBROATH.

A. S. and SON keep a Stock of Lawn Mowers at 27, Leadenhall Street, London, from which Orders can be at once executed. They also have at their London Warehouse a staff of experienced Workmen thoroughly acquainted with all the details of these Machines, so that they are enabled to repair Lawn Mowers in London as well as at the Manufactory.



## NEW ZONAL PELARGONIUMS.

DOWNIE, LAIRD, AND LAING most respectfully announce that they will send out the following splendid varieties, which have been so much admired, and have received the highest awards wherever shown, including First-class Certificates at the Royal Horticultural Society. The following extract is from the 'Journal of Horticulture,' July 17, 1866:—"There are so many good Nosegays, and so much alike, that it requires something quite new in colour to surpass them, or, in many cases, to equal them. The large bold truss of Stella and Le Grand, or the KING OF THE NOSEGAYS, must be the models of perfection in this class of flowers."

**KING OF THE NOSEGAYS.**—Bright orange-scarlet. Very large truss, dwarf habit. Very free and most effective variety. 7s. 6d. each.

**MRS. LAING (NOSEGAY).**—Glowing carmine-scarlet. Very dwarf, free, and most effective as a bedder. A beautiful and distinct variety. 5s. each.

**MRS. MENZIES.**—Bright rosy-salmon. Flowers perfect, good habit, free, and very fine. 5s. each.

**SAMBO.**—Very dark glossy scarlet, of great substance. Flowers of the finest form. Very large, compact, globular truss; quite distinct from all others. 7s. 6d. each.

Ready second week in May.

STANSTEAD PARK NURSERY, FOREST HILL, S.E.

## THE NEW ENGLISH HYBRID PERPETUAL ROSES AND ZONAL GERANIUMS

### ROBERT WARD,

Raiser of the Celebrated Rose JOHN HOPPER, begs to announce that his

#### BEDDING ROSES,

MRS. WARD, MRS. JOHN BERNERS, AND IPSWICH GEM,

Will be sent out in the Spring; also,

#### GROOM'S ZONAL GERANIUMS,

MISS MARTIN, SIR FITZROY KELLY, AND FLORIBUNDA ALBA NANA.

The Set of Roses, 21s. The Set of Geraniums, 10s. 6d. Package included.

See 'Journal of Horticulture,' June 26th, and July 31st; also 'Floral Magazine' for September, October, and last month, in which they are figured.

A Descriptive Circular will be sent on application. Beautiful Illustrations, each 13 Stamps.

## NEW ZONAL PELARGONIUMS.

SALTMARSH AND SON, Nurserymen, Seedsmen, and Florists, Chelmsford, have great pleasure in introducing the following SEEDLINGS of their own raising, feeling confident they will give equal satisfaction with the two now well-known varieties, Luna and Little Treasure, sent out by them in 1865. They will be ready for distribution in May next. Early orders are solicited, as the stock is limited.

#### ZONAL PELARGONIUMS.

**REINE D'ITALIE** (Saltmarsh and Son).—A seedling from the highly esteemed variety Roi d'Italie, possessing all the good properties of its parent in compactness of habit, profusion, form, and size of flowers, each blossom measuring  $1\frac{1}{2}$  of an inch in diameter; colour, pale salmon-flesh, shading off to flesh-white at the edges, with pure white eye, altogether forming a most attractive specimen for pot culture. Price 7s. 6d. each.

**CRITERION** (Saltmarsh and Son).—Also a seedling from Roi d'Italie, with darker zone, producing an abundance of flowers, of the large size of its parent, of the most perfect form, and borne on stout footstalks; habit compact and vigorous; colour bright orange-vermilion, with small white eye. Price 7s. 6d. each.

#### VARIEGATED ZONAL PELARGONIUMS.

**METEOR** (Saltmarsh and Son).—Foliage large and flat, almost circular, having a green disc about  $1\frac{1}{4}$  inch in diameter, surrounded by a very broad and well-defined zone of deep sienna maroon and bright red in about equal proportions, leaving a clear margin of about a quarter of an inch of bright chrome-yellow; flowers bright scarlet, with white eye; habit compact and vigorous. Figured in 'Floral Magazine' for January, 1867.

The above splendid variety will prove a valuable addition to the Golden Tricolor section of variegated Pelargoniums. It is quite distinct from any variety hitherto introduced, and was awarded a First-class Certificate at the Royal Horticultural Society's meeting in September, 1864. Price 21s. each.

**ELECTRIC** (Saltmarsh and Son).—Foliage greenish-yellow, changing with exposure to sun and air to a rich golden yellow, with a very broad zone of dark chocolate, in the way of Luna, but more heavily zoned, and of more robust habit, producing fine trusses of scarlet flowers, with white eye. Price 10s. 6d. each.

**VENUS** (Saltmarsh and Son).—Foliage greenish-yellow, changing to golden-yellow, with slight bronze zone; habit compact and spreading, producing neat trusses of well-formed flowers on short footstalks of a soft and pleasing shade of rosy-cerise, altogether forming a most attractive variety by the harmonious blending of its colours and its remarkably close habit of growth. Price 10s. 6d. each.

**SNOWSTORM** (Saltmarsh and Son).—Foliage green, with a very deep edge of pure white. This variety will be found to display a greater proportion of white variegation than any other yet produced. The leaves are less disposed to curl than most varieties of this class; in addition to which, the habit is exceedingly close, yet robust and bushy; flowers rosy-scarlet, with white eye. Price 10s. 6d. each.



## NEW ZONALE GERANIUMS.

DUCHESS OF SUTHERLAND, INTERNATIONAL, LADY CONSTANCE GROSVENOR.

The above Nosegay Varieties were selected from many thousand seedlings, and have gained the highest awards wherever shown. The 'Gardener's Magazine' says, "And this brings me to DUCHESS OF SUTHERLAND and LADY CONSTANCE GROSVENOR, which have been several times shown by Mr. Turner this season, and ought to be sent out next spring at nothing less than a guinea a plant, to recoup their raisers for the hundreds they have need to grow for the muck-heap." *Strong Plants now ready, 5s. each.*

CHARLES TURNER, THE ROYAL NURSERIES, SLOUGH.

## CHOICE SEEDS.

WILLIAM CUTBUSH AND SON strongly recommend the following:—

PRIMULA SINENSIS FIMBRIATA, of the finest possible strain, Red, White, or mixed, 2s. 6d., 3s. 6d., and 5s. per packet.

CALCEOLARIA, saved from James's choice strain, very fine, 2s. 6d., 3s. 6d., and 5s. per packet.

CINERARIA from named flowers, 2s. 6d., 3s. 6d., and 5s. per packet.

SNOW'S WINTER WHITE BROCCOLI, true, W. C. & Son's own saving, 2s. 6d. per packet.

NUNEHAM PARK ONION, 2s. 6d. per packet.

For other Choice Seeds see Catalogue, Post-free.

HIGHGATE NURSERIES, LONDON, N.

## NEW TRICOLORED GERANIUMS.

F. AND A. SMITH'S CATALOGUE FOR 1867, containing Descriptions of their Splendid Varieties of the above, which have obtained the following awards:—

Two £5 Prizes for the Collection ..... Crystal Palace.

A Prize for the Collection.....	Liverpool.	Five Certificates.....	Peterborough.
A Prize for the Collection.....	Manchester.	Five Certificates.....	Nottingham.
A Prize for the Collection.....	Leicester.	Six Certificates.....	Brighton.
A Prize for the Collection.....	Birmingham.	One Certificate.....	International.

May now be had on application.

DULWICH, SURREY.

## NEW BICOLORED AND ZONALE GERANIUMS.

F. AND A. SMITH'S CATALOGUE FOR 1867 is now ready, containing Descriptions of the above, which have obtained Thirteen Certificates.

DULWICH, SURREY.

## NEW ROSES, 1867.

F. AND A. SMITH'S DESCRIPTIVE CATALOGUE of the above may be had on application. Strong seasoned Plants now ready.

DULWICH, SURREY.

## BENJAMIN EDGINGTON

MARQUEE, TENT, RICK-CLOTH, AND FLAG MANUFACTURER,

BY SPECIAL APPOINTMENT TO HER MAJESTY  
AND H.R.H. THE PRINCE OF WALES.



MARQUEES & TENTS FOR HORTICULTURAL SHOWS  
FOR SALE OR HIRE.

*Rick Cloths, New and Second-hand, with Poles, etc., complete.*

TANNED NETTING FOR FRUIT TREES, NEW AND REPAIRED.

SCRIMS FOR GREENHOUSE BLINDS, FRIGI DOMO, ETC.

*An Illustrated Catalogue Free by Post.*



Be particular to observe the Christian Name, BENJAMIN EDGINGTON (only),  
2, DUKE STREET, LONDON BRIDGE, S.E. No other Establishment.



## WORKS ON NATURAL HISTORY.

- MONOGRAPH OF ODONTOGLOSSUM.** By JAMES BATEMAN, Esq. Part IV., Imp. folio. 5 coloured plates, £1. 1s. CONTENTS: *Odontoglossum Læve*, *Odontoglossum Luteo-purpureum*, *Odontoglossum Bictoniense*, *Odontoglossum Alexandræ*, *Odontoglossum Maculatum*.
- SECOND CENTURY OF ORCHIDACEOUS PLANTS.** By JAMES BATEMAN, Esq. Part VII., royal 4to, 10 coloured plates, 10s. 6d. CONTENTS: *Renanthera Lowii*, *Trichopilia Turialvæ*, *Epidendrum Myrianthum*, *Pilumna Fragens*, *Oncidium Longipes*, *Dendrobium Eburneum*, *Odontoglossum Cordatum*, *Phalænopsis Lowii*, *Dendrobium Bigibbum*, *Orchis Foliosa*.
- THE BOTANICAL MAGAZINE.** Edited by Dr. HOOKER, Third Series, No. 269, May, 6 coloured plates, 3s. 6d. CONTENTS: *Dalechampia Roezliana*, *Agave Schidigera*, *Gomphia Theophrasta*, *Epidendrum Eburneum*, *Myrtus Cheken*.
- THE FLORAL MAGAZINE.** Edited by the Rev. H. HONYWOOD DOMBRAIN. No. 85, May, 4 coloured plates, 2s. 6d. CONTENTS: Varieties of Persian Cyclamen, *Lælia Pilcheri*, *Coleus Gibsonii*, *Verbena*, *Lady of Langlebury*.
- HANDBOOK OF THE NEW ZEALAND FLORA.** By Dr. HOOKER, F.R.S. Part I., 16s. Part II., 14s. Or complete in one volume, £1. 10s.
- FLORA AUSTRALIENSIS.** By G. BENTHAM, F.R.S. Vol. III., £1.
- HANDBOOK OF THE BRITISH FLORA;** a Description of the Flowering Plants and Ferns indigenous to, or naturalized in, the British Isles. For the Use of Beginners and Amateurs. By GEORGE BENTHAM, F.R.S., President of the Linnean Society. *New Edition.* Crown 8vo, 12s.
- THE ILLUSTRATED BRITISH FLORA;** a Description (with a Wood Engraving, including Dissections, of each Species) of the Flowering Plants and Ferns indigenous to, or naturalized in, the British Isles. By G. BENTHAM, F.R.S. Demy 8vo, 2 vols., 1295 Wood-Engravings, from Original Drawings by W. FITCH, £3. 10s.
- THE FIELD BOTANIST'S COMPANION;** a Familiar Account, in the Four Seasons, of the Wild Flowering Plants of the British Isles. By THOMAS MOORE, F.L.S. Demy 8vo, 24 Coloured Plates, by W. FITCH, 21s.
- THE BRITISH FERNS.** Figures and Descriptions, with Analyses of the Fructification and Venation, of the Ferns of Great Britain and Ireland, systematically arranged. By Sir W. J. HOOKER, F.R.S. Royal 8vo, 66 Coloured Plates, £2. 2s.
- GARDEN FERNS.** Figures and Descriptions, with Analyses of the Fructification and Venation, of a Selection of Exotic Ferns, adapted for Cultivation in the Garden, Hothouse, and Conservatory. By Sir W. J. HOOKER, F.R.S. Royal 8vo, 64 Coloured Plates, £2. 2s.
- FILICES EXOTICÆ.** Figures and Description of Exotic Ferns, chiefly of such as are cultivated in the Royal Gardens at Kew. By Sir W. J. HOOKER, F.R.S. Royal 4to, 100 Coloured Plates, £6. 11s.
- FERNY COMBES;** a Ramble after Ferns in the Glens and Valleys of Devonshire. By CHARLOTTE CHANTER. *Third Edition.* 8 coloured plates and a Map of the County, 5s.
- BRITISH FUNGOLOGY.** Containing Characters of above a Thousand Species of Fungi, and a complete List of all that have been described as Natives of the British Isles. By the Rev. M. J. BERKELEY, M.A., F.L.S. 8vo, 24 Coloured Plates, 30s.
- THE ESCULENT FUNGUSES OF ENGLAND.** Containing an Account of their Classical History, Uses, Characters, Development, Structure, Nutritious Properties, Modes of Cooking and Preserving, etc. By C. D. BADHAM, M.D. *Second Edition.* Edited by F. CURREY, F.R.S. 8vo, 12 Coloured Plates, 12s.
- BRITISH MOSSES.** Containing all that are known to be Natives of the British Isles. By the Rev. M. J. BERKELEY, M.A., F.L.S. 8vo, 24 Coloured Plates, 21s.
- GUIDE TO COOL-ORCHID GROWING.** By JAMES BATEMAN, Esq., F.R.S., Author of 'The Orchidaceæ of Mexico and Guatemala.' Woodcuts, 1s.
- SYNOPSIS OF BRITISH SEAWEEDS.** From Dr. Harvey's 'PHYCOLOGIA BRITANNICA.' 5s.
- BRITISH SPIDERS;** an Introduction to the Study of the ARANEIDÆ of Great Britain and Ireland. By E. F. STAVELEY. Crown 8vo, 16 Plates, drawn expressly for the work, by TUFFEN WEST, containing Coloured Figures of nearly 100 Species, 10s. 6d.
- BRITISH BEES;** an Introduction to the Study of the Natural History and Economy of the Bees indigenous to the British Isles. By W. E. SHUCKARD. Crown 8vo, 16 Coloured Steel Plates, containing nearly 100 Figures, engraved from Natural Specimens expressly for the work, by E. W. ROBINSON, 10s. 6d.
- BRITISH BEETLES;** an Introduction to the Study of our Indigenous COLEOPTERA. By E. C. RYE. Crown 8vo, 16 Coloured Steel Plates, comprising Figures of nearly 100 Species, engraved from Natural Specimens expressly for the work, by E. W. ROBINSON, 10s. 6d.
- BRITISH FERNS;** an Introduction to the Study of the Ferns, Lycopods, and Equiseta indigenous to the British Isles. With Chapters on the Structure, Propagation, Cultivation, Diseases, Uses, Preservation, and Distribution of Ferns. By MARGARET PLUES. Crown 8vo, 16 Coloured Plates, drawn expressly for the work, by W. FITCH, and 56 Wood-Engravings, 10s. 6d.



New Edition, in Foolscap 8vo, with Four Woodcuts, price 4s.,

## THE ROSE AMATEUR'S GUIDE;

Containing ample Descriptions of all the fine leading Varieties of Roses, regularly classed in their respective Families; their History and Mode of Culture. By THOMAS RIVERS. Ninth Edition, including a Rose-Garden Calendar.

LONDON: LONGMANS, GREEN, and CO., Paternoster Row.

## NEW PLANTS FOR 1867.

HENRY CANNELL has great pleasure in introducing to the public the following Plants, of unusual advance on all other kinds in their respective classes. They have been chosen from upwards of Three Hundred Seedlings, sent from almost every county in the United Kingdom, and are sure to give the greatest satisfaction by their superior qualities.

### FUCHSIAS.

**KING OF THE DOUBLES.**—This is the finest exhibition Double Fuchsia ever sent out. Habit perfect; the corolla beautifully striped. 7s. 6d. each.

**MRS. GLADSTONE.**—Great advance on all the white corolla kinds, and reflex equal to the well-known Guiding Star. 7s. 6d. each.

**BLAND'S FLORIBUNDA.**—This Fuchsia will introduce a new race, being perfectly distinct from all others ever sent out, and H. C. believes it will become equal to the well-known Tom Thumb Geranium, and will shortly be planted in every garden and on every window. It has a scarlet tube and sepals, pure white corolla; very short, stiff growth, requiring no stakes. A bed of this looks at a distance to have the appearance of being covered with thousands of stars. For bedding and small pots this really has no equal, and is a decided acquisition. 5s. each.

**THE PERFECT CURE.**—Scarlet tube, and sepals perfectly reflexed; good habit and grower, with a most extraordinary-shaped corolla, which make it one of the most pleasing and curious novelties in the Fuchsia ever seen. The corolla is formed on the ends of each stamen, and measures from tip to tip three to four inches over, and is a very attractive and amusing variety. 5s. each, the set of four for £1. 1s. Ready to send out on the 1st of May.

**MONSTER.**—This is the largest ever sent out, the corolla measuring from two to two and a half inches over, and is as large as a Rose; scarlet tube and sepals, very rich violet-purple corolla, very short, stiff habit. On account of its immense blooms and good growth, and being an abundant bloomer, this is the most saleable Fuchsia ever sent out. 7s. 6d. each.

The demand being so great for this, H. C. finds it impossible to get sufficient stock of it to send it out before the 1st of July.

### NEW TROPÆOLUMS COMPACTUM.

FOR BEDDING AND RIBBON BORDERING.

**LUTEUM IMPROVED.**—Immense improvement upon the one sent out last season. Beautiful bright yellow, for bedding, etc. No Calceolaria is near an equal to this for its continual and abundance of bloom. 1s. 6d. each.

**THE MOOR.**—In every way equal to the above; colour, deep-dark maroon-crimson, a grand new colour for bedding; has long been required for geometric gardens. 1s. 6d. each.

**SCARLET GEM.**—For its beautiful colour and dwarf compact habit, and continual massive blooming, no Scarlet Geranium is equal to this. 2s. 6d. each.

These were examined when growing in the garden by the Committee, and all were awarded a First-Class Certificate.

**NOVELTY.**—In every way equal to the above; with a beautiful peculiar mixed bronze and yellow colour; fine for fancy beds, being quite a novel attractive colour. 2s. each.

These were raised by Mr. J. George, who is well known for introducing this new race of bedding plants; and they are equally valuable for pots, having been in bloom ever since Christmas. All these are acknowledged to be decided acquisitions. The following is an

Official Description from the 'UNITED HORTICULTURAL SOCIETY,' Dec. 8, 1866.

"All these were considered as great additions as bedding plants, and cannot be too extensively grown. They far surpass any other plants in profusion of bloom, and the weather does not affect them to any apparent extent; no one should be without them. In Scarlet Gem you have a most brilliant and attractive variety, far surpassing the T. Lobii section for effect in the parterre or ribbon-gardening."—W. HEALE, Secretary.

The set for 6s. 6d.; 12s. per dozen; £2. 2s. for 50; £4 for 100; package included. Ready on the 1st of May.

FLORAL GUIDE, with fuller description, for Four Stamps.

FUCHSIA NURSERY, WOOLWICH.





W. Fitch, del et lith.

Vincent. Brooks, Imp.



DALECHAMPIA ROEZLIANA.

*Roezl's Dalechampia.*

Nat. Ord. EUPHORBIACEÆ.—MONÆCIA POLYANDRIA.

*Gen. Char.* Flores monoici, ♂ et ♀, involuero compresso 2-phyllo 2-sexuali inclusi. Calycis ♂ laciniae 4-5, valvatae; ♀ 5-12, imbricatae. Petala utriusque sexus 0. Discus fl. ♂ 0; fl. ♀ saepius obsoletus. Stamina centralia, in receptaculo convexo sita; antherae 2-rimosae, loculi longitrorsum adnati. Ovarii loculi 1-ovulati. Capsula 3-4-cocca. Semina ecarunculata; cotyledones complanatae.—Frutices tropici, saepissime volubiles. Folia alterna, petiolata, penninervia v. palminervia, indivisa lobata v. ∞-foliolata. Stipulae 2. Flores axillares, pedunculati, bracteis foliaceis albis pallidis v. coloratis 2-stipulatis inclusi. Involucella ♀ 3-flora, ♂ ∞-flora, latere superiore floribus sterilibus carnosio-ceraceis pallidis multicristatis aucta.

DALECHAMPIA *Roezliana*; caule erecto, foliis sessilibus v. brevissime petiolatis obovato-oblongis lanceolatis spathulatisve longe acuminatis integerrimis v. supra medium grosse obtuse serratis basi angustatis cordato-2-lobis, stipulis ovato-triangularibus, ovario sericeo-pubescente, stylo gracillimo, stigmatibus obtusis.

VAR. *a. rosea*; involucri foliolis grosse dentatis serratisve pulchre roseis.

DALECHAMPIA *Roezliana*, var. *a. rosea*. Mueller Argan, in DC. Prod. v. 15., p. 1233.

A truly superb plant, one of the noblest introduced for many years, comparable only with the *Bougainvillae* amongst those of its habit, and exceeding these in the size and clear rose-colour of its broad membranous veined involucreal leaves. The specimen here figured was flowered in March of the present year by Mr. Bull, of Chelsea, who procured it from Messrs. Van Houtte, of Ghent. It is a native of Vera Cruz, and, according to its first describer, Dr. Mueller Argan (in De Candolle's 'Prodromus'), living plants were sent from Mexico to the Botanic Garden of Zurich by its discoverer, M. Roezl. Mueller further has another variety, *β viridis*, distinguished by its subentire leaves, and greenish or greenish-red involucreal leaves, which he states to be cultivated by



M. Van Houtte, and to have been received by that eminent nurseryman from M. Ortgies, of Zurich; but I can hardly fancy this variety being anything more than an imperfectly developed state of the original plant (*a rosea*).

The genus *Dalechampia* contains some fifty tropical plants, chiefly American; very few of them having any claims to horticultural notice, though the white bracts and scandent habit of some may recommend them.

DESCR. An erect shrub, three to four feet high, much branched and leafy, glabrous, bright-green. *Leaves* six inches long, subsessile, narrow obovate-oblong or -lanceolate, long acuminate, entire or coarsely obtusely toothed above the middle, narrowed and produced towards the base, which is cordate, dark shining green above, paler below. *Stipules* large, green, ovate or triangular-ovate. *Peduncles* solitary, axillary, strict, shorter than the leaves. *Involucral bracts* two to two and a half inches long, broadly cordate, sessile, toothed, membranous, nerved, of a brilliant rose-red colour, alternating with two small ovate, acute, green stipule-like outer bracts. *Flowers* clustered, male and female together, with many bracteoles at the base of the clusters. *Male flowers* on a jointed pedicel. *Sepals* five, oblong, spreading and incurved, puberulous. *Staminal* column cylindric, pubescent; *anthers* numerous, capitate; pedicelled waxy capitate bodies (imperfect male flowers) are clustered together at one side of the male flowers. *Female flowers* subsessile. *Calyx*-lobes six, erect, lanceolate, irregularly toothed or entire. *Ovary* pubescent, three-celled. *Style* very slender; stigma obtuse.—J. D. H.

---

Fig. 1. Cluster of flowers. 2. Ditto of imperfect males. 3. Male flower and pedicel. 4. Stamen. 5. Cluster of female flowers. 6. Female flower. 7. Ovary. 8. Transverse section of ditto:—all magnified.







TAB. 5641.

AGAVE SCHIDIGERA.

*Splintered-Leaved American Aloe.*

Nat. Ord. AMARYLLIDÆ.—HEXANDRIA MONOGYNIA.

*Gen. Char. (Vide supra, TAB. 5333.)*

AGAVE *schidigera*; acaulis, foliis horizontaliter patentibus pedalibus anguste ensiformibus spinuloso-acuminatis supra basin dilatatam paulo angustatis viridibus albo-lineatis marginibus late albo-lanatis in filis planis elongatis retortis desinentibus, scapo stricto gracili 6-pedali bracteis elongatis strictiusculis acicularibus dense obsito, spica elongata stricta subluxiflora, floribus viridibus 2-3-nis, fasciculis subsessilibus bractea filiformi subtensis, ovario cylindrico pollicari glaberrimo, perianthii tubo subinfundibuliformi ovario æquilongo, lobis lineari-oblongis revolutis acutis tubo æquilongis, filamentis subulatis perianthio æquilongis strictis, antheris lineari-elongatis.

AGAVE *schidigera*. Lemaire in *Verschaffelt Cat.* 1861; *Compte Rendu Soc. Roy. d'Agric. et Bot. Gand*, 1861; *Illust. Hortie.* v. 8. sub t. 287, et v. 9. t. 330.

AGAVE *filifera*, var. *pannosa* et var. *adornata*. Scheidw. in *Compte Rendu Soc. Roy. Agric. et Bot.*, et in *C. Koch, Wochenschr.* n. 36. 1861.

The remarkable plant here figured was introduced into Europe in 1861, from Mexico, by Mr. Verschaffelt, of Ghent, and its foliage was figured in the 'Illustration Horticole' of the following year, where it is also described by M. Lemaire, on whose authority our synonyms and quotations rest. Our specimen flowered in January in Mr. Williams's establishment, Paradise Nursery, Holloway, where the drawing was executed by Mr. Fitch. As a species, M. Lemaire states that it is so very closely allied to *A. filifera*, that he was at first disposed to regard it as a variety of that plant, but that it differs in the more linear (less oblong) leaves, more dilated at the base, their less pungent tips, and the very much thicker, broader, woolly, torn edges of the leaf,

MAY 1ST, 1867.



while, according to the figure of the *A. filifera* in the 'Revue Horticole,' the corolla-lobes of that plant are shorter.

DESCR. *Stem* none. *Leaves* forming a low subhemispherical mass; lower spreading and recurved; upper suberect, about one foot long, narrow linear-ensiform, with red sub-pungent apices, dilated at the base and slightly contracted above it; with irregular longitudinal broad white bands on both surfaces, and white edges, from which are given off woolly recurved flattened broad filaments, one to three inches long. *Scape* strict, erect, about six feet high, lower third covered with numerous erect or recurved subulate red-brown bracts, two inches long and upwards. *Spike* rather slender, very many-flowered, cylindric. *Flowers*, including the stamens, three and a half inches long, green, with yellow anthers, rather dense, in fascicles of two or three, each fascicle subtended by a filiform red flexuous bract. *Pedicels* very short, with very small broad bracteoles. *Ovary* cylindric, glabrous. *Perianth* tube as long and broad as the ovary, lobes as long as the tube, linear, acute, revolute. *Filaments* strict, subulate, one inch long; *anthers* nearly as long, linear-elongate. *Stigma* obtusely three-lobed. J. D. H.

---

Fig. 1. Reduced figure of entire plant. 2. Leaf, *nat. size*. 3. Flowers, *nat. size*.





W. Fitch, del et lith.

Vincent Brooks, Imp.



GOMPHIA THEOPHRASTA.

*Theophrasta-like Gomphia.*

Nat. Ord. OCHNACEÆ.—DECANDRIA MONOGYNIA.

*Gen. Char.* Sepala 5, decidua. Petala 5, calyce paulo longiora, obovata, unguiculata, imbricata. Torus crassus, lobatus, in gynophorum elevatus. Stamina 10, basi tori inserta, erecta, conniventia; antheræ sessiles, poris dehiscentes. Ovarium profunde 5-6-partitum; styli arcute connati, stigmate simplici; ovula in loculis solitaria, a basi adscendentia. Drupæ 5 v. abortu pauciores, toro ampliato sessiles. Semen erectum; testa membranacea; cotyledones carnosæ, plano-convexæ; radícula brevissima, ad hilum descendens.—Arbores v. frutices glaberrimæ. Folia alterna, persistentia, simplicia, coriacea, nitida, argute serrata, nervis creberrimis. Stipulæ liberæ v. connatæ. Paniculæ v. racemi terminales v. terminales et axillares, bracteate. Flores lutei, pedicellis basi articulatis.

GOMPHIA *Theophrasta*; foliis pedalibus brevissime petiolatis elongato-ovato-lanceolatis acuminate serrulatis supra basin obtusum integerrimis, paniculis ramosis ramis suberectis basi bracteis 2 subulatis stipulæformibus auctis, fasciculis 2-5-floris, floribus  $\frac{2}{3}$  un. diam., pedicellis gracilibus curvis ebracteolatis, sepalis oblongo-lanceolatis subacutis pallide viridibus, petalis oblongo-ovatis obtusis.

GOMPHIA *Theophrasta*. Lind. Hort. Cat. 1859.

WOLKENSTEINIA *Theophrasta*. Regel in Gartenfl. v. 14 (1865). p. 131. t. 471.

Of the large and handsome genus *Gomphia*, containing upwards of eighty species, almost all of them American, and distinguished for their glossy foliage, and many for their beautiful flowers, not half-a-dozen have been introduced into Europe, and only one, *G. olivæformis* (Tab. 5262), has hitherto been figured from living specimens in this country; yet no plants can be more suited for stove decoration, whether for the persistence of their bright, shining, ever-green foliage, or the golden colour of their inflorescence.

*G. Theophrasta* was introduced by Mr. Linden's collectors from South America, but of its exact native country I have no information. It is allied to the Brazilian *G. castaneæfolia*, DC., but differs conspicuously in the very much longer leaves,

MAY 1ST, 1867.



attenuated to an obtuse base, with the margins quite entire for an inch above the petiole, and in other points.

DESCR. A small stove *shrub*, probably becoming a bush or small tree in its native country. *Leaves* crowded at the apex of the stem, a foot long, three inches broad, spreading and recurved, on very short thick petioles a quarter of an inch long, acuminate, acutely serrulate from an inch above the base to the tip, oblong-lanceolate, almost linear below, rounded at the very base, not very coriaceous; veins numerous, arching. *Panicle* a foot long, copiously branched; branches stout, ascending, with two subulate stipuliform bracts at the base. *Flowers* one-third of an inch in diameter, in clusters of two to five on the branches of the panicle; pedicels spreading, slender, curved, without bracts. *Sepals* linear-oblong, obtuse, pale yellow-green. *Petals* golden-yellow, rather longer than the sepals, ovate-oblong, obtuse. J. D. H.

---

Fig. 1. Flower. 2. Stamen. 3. Pistil. 4. Transverse section of ovary:—*all magnified.*







TAB. 5643.

EPIDENDRUM EBURNEUM.

*Ivory-flowered Epidendrum.*

Nat. Ord. ORCHIDÆ.—GYNANDRIA DIANDRIA.

Gen. Char. (*Vide supra*, TAB. 5336.)

EPIDENDRUM (*Eupepidendrum*) *eburneum*; caulibus erectis fasciculatis teretibus foliosis, foliis oblongis lineari-oblongisve planiusculis obtusis coriaceis enerviis, racemo terminali 4-6-floro brevi inclinato, bracteis parvis viridibus late ovato-triangularibus, sepalis lineari-lanceolatis acuminatis integerrimis pallide citrinis, petalis angustioribus, labello ungue columnæ adnato lamina ampla cordato-rotundata acuta integerrima planiuscula eburnea basi 2-tuberculata, columna crassiuscula apice truncata sub-5-dentata.

EPIDENDRUM eburneum. *Reichenb. fil. in Gard. Chron.* 1867, p. 404.

A handsome stove Orchid, discovered by Mr. P. Henderson, of the Royal Mail Packet Company's service, by whom it was sent to T. R. Tuffnell, Esq., of Spring Grove, Isleworth. It was found within a few miles of Colon, in Panama, growing in swamps, close by the railway, and flowered with Mr. Tuffnell in December, 1866. It belongs to the subsection "*planifolia racemosa*" of the section *Eupepidendrum* in Lindley's arrangement of this vast and difficult genus, as given in his 'Folia Orchidacea,' but is wholly different from all described species, and from any preserved in the Lindleyan or Hookerian Herbaria at Kew. Though wanting the gorgeous colours of so many stove Orchids, its good foliage and ivory-white lip recommend it for cultivation.

DESCR. *Stems* tufted, one to two feet high, terete, leafy, as thick above as a swan's quill, more slender below, deep green. *Leaves* alternate, spreading, plane, three and a half to four and a half inches long, and an inch and a quarter broad, linear-oblong, obtuse, amplexicaul, very coriaceous, with an impressed costa but no nerves, dark green on both surfaces. *Raceme* terminal, without spathes or membranous bracts,

MAY 1ST, 1867.

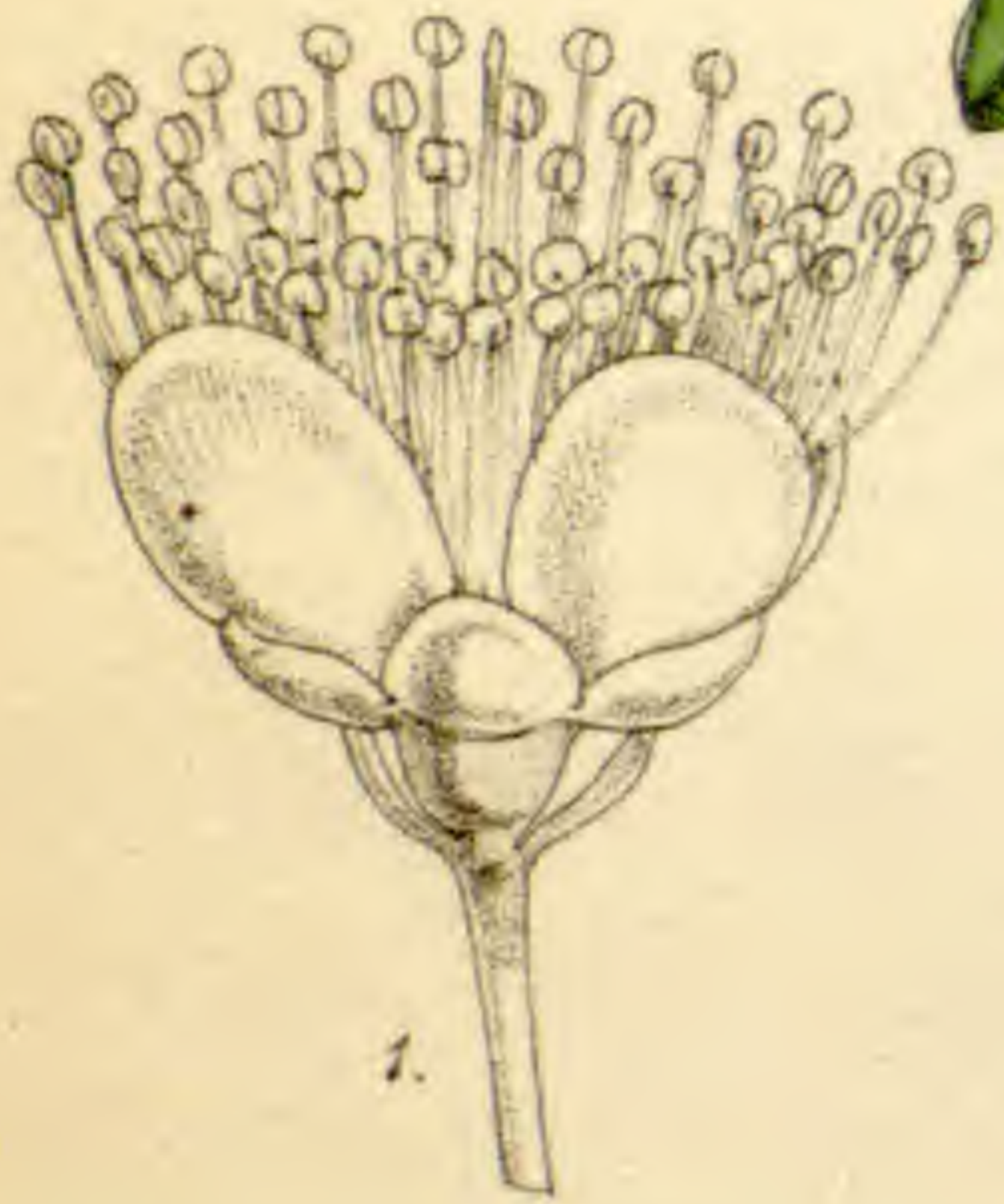


four- to six-flowered; rachis inclined, stout, green, terete. *Bracts* minute, green, broadly triangular-ovate. *Ovary* gibbous, pedicelled. *Sepals* an inch and three-quarters long, spreading, linear-lanceolate, acuminate, quite entire, and, as well as the equally long but narrower petals, of a pale citron-green colour. *Lip* sessile on the apex of the column, orbicular-cordate, an inch and a quarter to an inch and a half in diameter, ivory-white, slightly concave, subacute, quite entire, smooth, with two small yellow calli at its base. *Column* stout, truncate and five-toothed in fruit, white like the lip.—*J. D. H.*

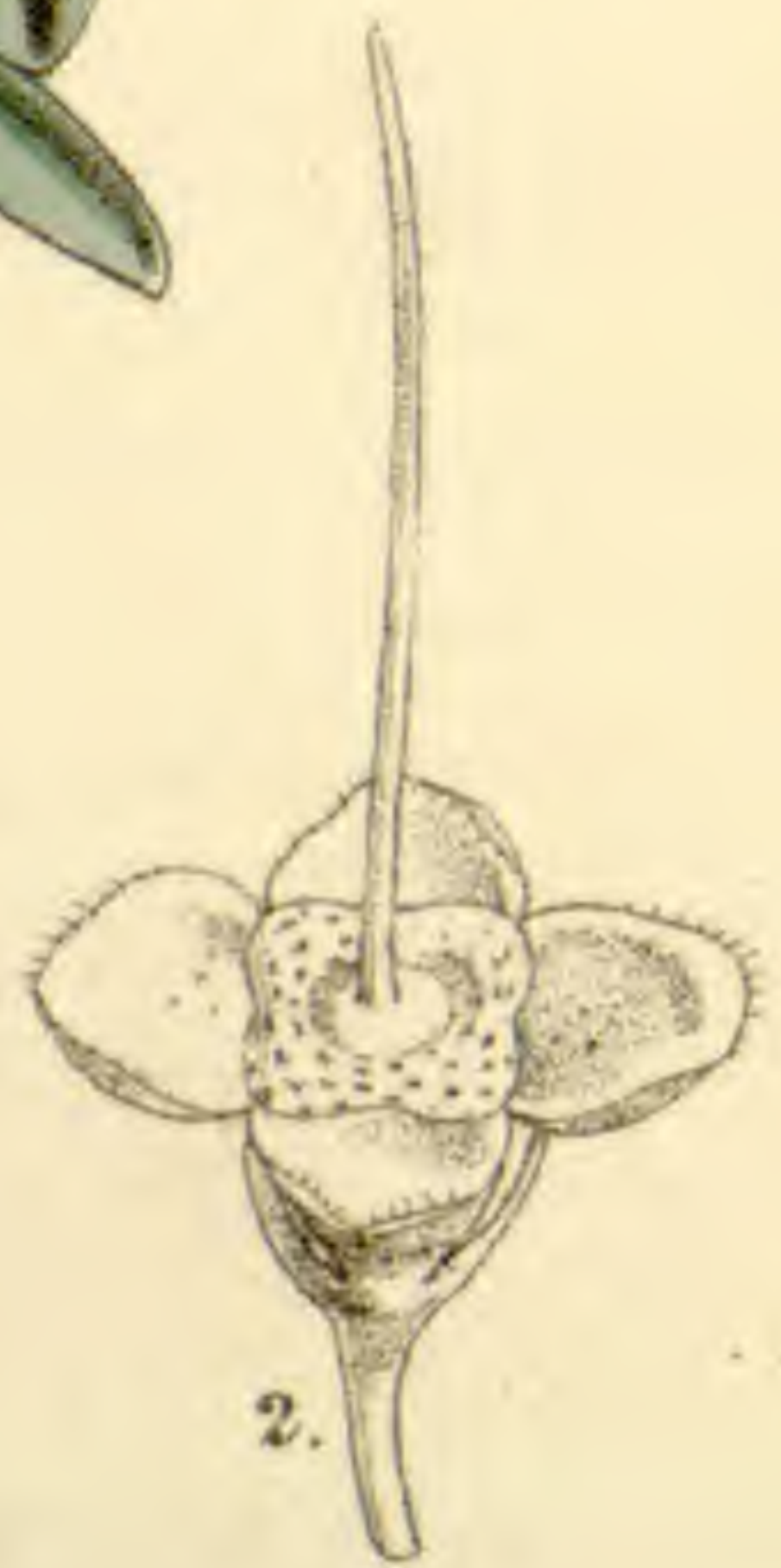
---

Fig. 1. Ovary and column. 2 and 3. Pollinia:—*magnified*.





1.



2.



MYRTUS CHEKEN.

*Chequen of Chili.*

Nat. Ord. MYRTACEÆ.—POLYANDRIA MONOGYNIA.

*Gen. Char.* Calycis tubus turbinatus, adnatus, ultra ovarium vix aut breviter productus; lobi 4-5, imbricati v. aperti. Petala 4-5, patentia. Stamina  $\infty$ ,  $\infty$ -seriata, libera; antheræ basifixæ, rimis dehiscentes. Ovarium perfecte v. imperfecte liberum, 2-3- rarius 4-loculare; stylus filiformis, stigmate parvo v. rarius capitato; ovula in loculis  $\infty$ , angulo centrali inordinate  $\infty$ -seriatim affixa. Bacca calycis tubo inclusa, limbo coronata v. rarius limbo deciduo nuda. Semina perfecta 1-2- $\infty$ , subreniformia, testa ossea crustacea v. membranacea; embryo hippocrepicus v. parum involutus, radícula longissima tereti, cotyledonibus multo brevioribus nunc minimis.—Frutices, rarius arbores. Folia opposita. Pedunculi axillares, sæpius graciles, 1-3-7- rarius  $\infty$ -flori.

MYRTUS (Luma) *Cheken*; fruticosa, dense foliosa, ramulis glabris puberulis tomentosive obscure 4-gonis foliisque glanduloso-punctatis, foliis patulis breviter petiolatis elliptico- v. oblongo-ovatis apiculatis basi obtusis acutisve utrinque glaberrimis nervis paucis indistinctis, pedunculis 1-floris foliis longioribus brevioribusve, bracteolis infra calycem subulatis, floribus  $\frac{1}{2}$  unc. diam. albis 4-meris, calycis lobis petalisque orbiculatis, petalis glabris ciliolatisve.

MYRTUS *Cheken*. *Spreng. Syst. Veg.* v. 2. p. 85, *excl. syn.*

EUGENIA *Cheken*. *DC. Prodr.* v. 3. p. 276. *Hook. et Arn. Bot. Beech. Voy.* 56. *C. Gay, Fl. Chil.* v. 2. p. 390.

LUMA *Cheken*. *A. Gray, Bot. U. S. Expl. Exped.* v. 1. p. 536. t. 66.

This is one of those pretty evergreen Chilian plants, so suitable for walls in all the milder parts of England, and for greenhouse decoration everywhere, but which is apt to be cut by a winter's cold below the average, and burnt by a long summer's drought, on the eastern side of the kingdom. Its nearest affinity is with the *Myrtus Luma* (*Eugenia Luma*, supra, Tab. 5040), which, indeed, is united (perhaps rightly) with it as a variety by A. Gray, but that plant has more distinctly apiculate leaves and usually three-flowered peduncles.

MAY 1st, 1867.



*Myrtus Cheken* has been for some years in cultivation, and was introduced from Chili, I believe, by Messrs. Veitch. The plant from which the accompanying drawing was made flowered in Kew in July, 1866. In Chili it is in great repute as a medicine in cases of inflammation of the eyes, in diarrhœa, and in other disorders.

DESCR. A small, densely-leafy, much branched shrub. *Branchlets* obscurely tetragonous, glabrous pubescent or tomentose, covered with glandular dots. *Leaves* close-set, shortly petioled, one-third of an inch long, oblong-ovate or oblong, obtuse, apiculate or subacute, nearly flat, quite glabrous, nerves obscure. *Peduncles* solitary, usually one-flowered, shorter or longer than the leaves, slender. *Flower* two-thirds of an inch in diameter, white. *Calyx tube* turbinate, with two subulate bracts at the base; *limb* of four orbicular lobes. *Petals* orbicular, glabrous or ciliated. *Stamens* very numerous.—*J. D. H.*

---

Fig. 1. Flower. 2. The same, with the petals and stamens removed:—*magnified.*



# WORKS ON BOTANY.

- BENTHAM'S ILLUSTRATED BRITISH FLORA**; a Description (with a Wood-Engraving, including dissections, of each species) of the Flowering Plants and Ferns indigenous to, or naturalized in, the British Isles. 2 vols. 8vo. 1295 Wood-Engravings, from Original Drawings by W. FITCH. £3. 10s.
- BENTHAM'S HANDBOOK of the BRITISH FLORA**; a Description of the Flowering Plants and Ferns indigenous to, or naturalized in, the British Isles. For the Use of Beginners and Amateurs. 12s.
- MOORE'S FIELD BOTANIST'S COMPANION**; a Familiar Account, in the Four Seasons, of the most common of the Wild Flowering Plants of the British Isles. 24 Coloured Plates, by W. FITCH. 21s.
- BENTHAM'S OUTLINES of ELEMENTARY BOTANY**, as Introductory to Local Floras. 2s. 6d.
- HOOKE'S FLORA of NEW ZEALAND**; a Systematic Description of the Native Plants of New Zealand, and the Chatham, Kermadec's, Lord Auckland's, Campbell's, and Macquarrie's Islands. Part I., 16s. Part II., 14s., or complete in one vol., 30s. Published under the auspices of the Government of that colony.
- BENTHAM'S FLORA AUSTRALIENSIS**; A Description of the Plants of the Australian Territory. Vols. I. to III., 20s. each. Published under the auspices of the several Governments of Australia.
- GRISEBACH'S FLORA of the BRITISH WEST INDIAN ISLANDS**. 37s. 6d. Published under the auspices of the Secretary of State for the Colonies.
- BENTHAM'S FLORA HONGKONGENSIS**; a Description of the Flowering Plants and Ferns of the Island of Hongkong. With a Map of the Island. 16s. Published under the authority of Her Majesty's Secretary of State for the Colonies.
- HOOKE'S FLORA of TASMANIA**; Royal 4to, 2 vols. 200 Coloured Plates. £17. 10s. Published under the authority of the Lords Commissioners of the Admiralty.
- HOOKE on the FLORA of AUSTRALIA**, its Origin, Affinities, and Distribution. 10s.
- HOOKE'S RHODODENDRONS of SIKKIM-HIMALAYA**; being an account, Botanical and Geographical, of the Rhododendrons recently discovered in the Mountains of Eastern Himalaya, from Drawings and Descriptions made on the spot, by Dr. J. D. HOOKE, F.R.S. Folio, 30 Coloured Plates. £3. 16s.
- MOGGRIDGE'S FLORA of MENTONE**. Royal 8vo. Parts I. and II., each, 25 Coloured Plates, 15s.
- WOODS'S TOURIST'S FLORA**; Descriptive Catalogue of the Flowering Plants and Ferns of the British Islands, France, Germany, Switzerland, Italy, and the Italian Islands. 18s.
- HOOKE'S BRITISH FERNS**; Figures and Descriptions, with Analyses of the Fructification and Venation, of the Ferns of Great Britain and Ireland, systematically arranged. Royal 8vo, 66 Coloured Plates, £2. 2s.
- HOOKE'S GARDEN FERNS**; Figures and Descriptions, with Analyses of the Fructification and Venation, of a Selection of Exotic Ferns, adapted for Cultivation in the Garden, Hothouse, and Conservatory. Royal 8vo, 64 Coloured Plates, £2. 2s.
- HOOKE'S FILICES EXOTICÆ**; Figures and Descriptions of Exotic Ferns, chiefly of such as are cultivated in the Royal Gardens of Kew. Royal 4to, 100 Coloured Plates, £6. 11s.
- CHANTER'S FERNY COMBES**; a Ramble after Ferns in the Glens and Valleys of Devonshire. Second Edition. 8 Coloured Plates and a Map of the County, 5s.
- BERKELEY'S BRITISH MOSSES**, containing all that are known to be Natives of the British Isles. 24 Coloured Plates, 21s.
- BERKELEY'S BRITISH FUNGOLOGY**, containing Characters of above a Thousand Species of Fungi, and a Complete List of all that have been described as Natives of the British Isles. 24 Coloured Plates, 30s.
- BADHAM'S ESCULENT FUNGUSES of ENGLAND**, containing an Account of their Classical History, Uses, Characters, Development, Structure, Nutritious Properties, Modes of Cooking and Preserving, etc. New Edition. Edited by F. CURREY, F.R.S. 12 Coloured Plates, 12s.
- HUSSEY'S BRITISH MYCOLOGY**, comprising Figures and Descriptions of the Funguses of interest and novelty indigenous to Britain. Royal 4to. First Series, 90 Coloured Plates, £7. 12s. 6d.; Second Series, 50 Coloured Plates, £4. 10s.
- HARVEY'S PHYCOLOGIA BRITANNICA**; or, History of British Seaweeds, containing Coloured Figures, Generic and Specific Characters, Synonyms and Descriptions of all the Species of Algæ inhabiting the Shores of the British Islands. Royal 8vo, 4 vols., 360 Coloured Plates, £6. 6s.
- HARVEY'S SYNOPSIS of BRITISH SEA-weeds**. 5s.
- HARVEY'S PHYCOLOGIA AUSTRALICA**; a History of Australian Seaweeds, comprising Coloured Figures and Descriptions of the more characteristic Marine Algæ of the South Hemisphere. Royal 8vo, 5 vols., 300 Coloured Plates, £7. 13s.
- HARVEY'S NEREIS AUSTRALIS**; or, Algæ of the Southern Ocean. Imperial 8vo, 50 Coloured Plates, £2. 2s.



*Just published, Crown 8vo, with Wood-engravings, price 7s. 6d.*

# SUNSHINE AND SHOWERS:

THEIR

INFLUENCES THROUGHOUT CREATION.

A POPULAR COMPENDIUM OF  
METEOROLOGY, CURIOSITIES OF THE WEATHER,  
AND WEATHER WISDOM.

BY

ANDREW STEINMETZ, Esq.,

OF THE MIDDLE TEMPLE, BARRISTER-AT-LAW,  
AUTHOR OF 'A MANUAL OF WEATHER-CASTS,' ETC. ETC.

---

This Work not only treats fully all the leading topics of METEOROLOGY, but especially of the use of the HYGROMETER, for which systematic RULES are now for the first time drawn up. Among other interesting and useful subjects, are chapters on RAINFALL in England and Europe in general—WET AND DRY YEARS—*Temperature and Moisture with respect to the health of Plants and Animals*—The Wonders of Evaporation—Soil Temperature—The Influence of Trees on Climate and Water Supply—THE PROGNOSTICATION OF THE SEASONS AND HARVEST—The Characteristics and Meteorology of the Seasons—Rules of the Barometer—Rules of the *Thermometer* as a *Weather Glass*—POPULAR WEATHER-CASTS—ANEMOMETRY—and finally, *What becomes of the Sunshine*—and *What becomes of the Showers*.

"The author has explained the subjects with a fulness never before attempted, and has introduced a variety of practical suggestions which will be useful to all classes of readers. . . . The book is written with much cleverness, and is calculated to amuse as well as instruct."—*Observer*.

---

*Just published, Crown 8vo, 9s.*

## THE REASONING POWER IN ANIMALS.

BY THE REV. J. S. WATSON.

"Full of entertainment, of instruction, and of matter suggestive of thought on that strange world of utterly mysterious life with which we come into daily contact, but of the essence of which we know scarcely anything."—*Daily News*.

---

*Just published, Crown 8vo, with Woodcuts and Lithographic Frontispiece, 6s.*

## METEORS, AEROLITES, AND FALLING STARS.

BY DR. T. L. PHIPSON.

"Dr. Phipson has earned the thanks of the public by his clear and pains-taking statement of what these facts encourage us to accept as truths of physics."—*Saturday Review*.

---

REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.



# GREEN'S PATENT SILENS MESSOR,

OR

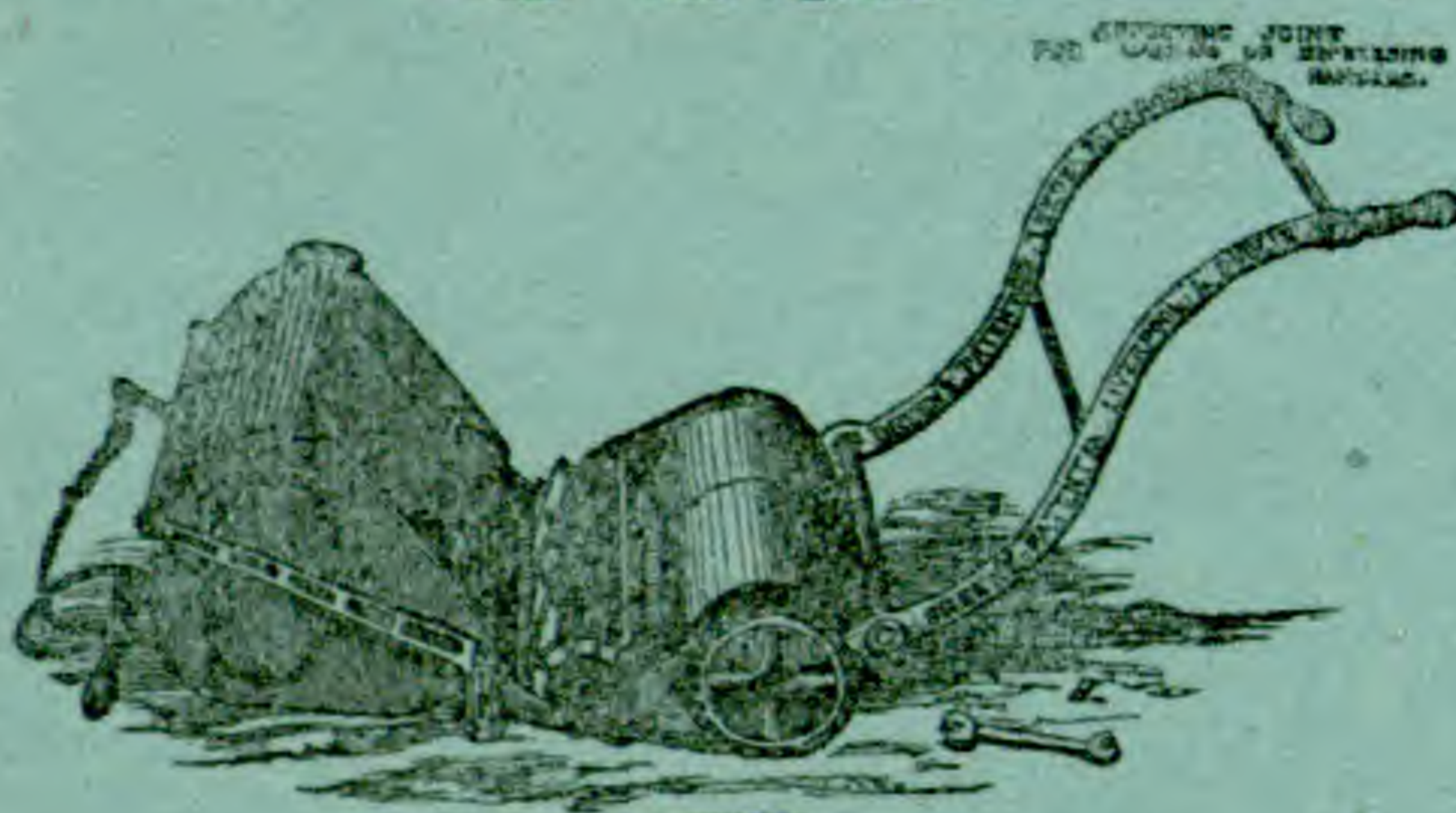
NOISELESS LAWN MOWING, ROLLING AND COLLECTING MACHINES.  
FITTED WITH PATENT SELF-SHARPENING CYLINDER CUTTERS.

By Special Appointment  
Sole Manufacturer



To Her Most Gracious  
Majesty the Queen.

Every Machine is warranted to give entire satisfaction, and if not approved of can be returned unconditionally.



Green's Patent Lawn Mowers have proved to be the best, and have carried off every prize that has been given in all cases of competition.

## PRICES OF HAND MACHINES.

To cut 10 inches ... £3 10 0 ... Suitable for a Lady	To cut 18 inches ... £7 10 0 Suitable for one person
" 12 " ... 4 10 0 ... " "	" 20 " ... 8 0 0 Suitable for two persons
" 14 " ... 5 10 0 ... Suitable for one person	" 22 " ... 8 10 0 " "
" 16 " ... 6 10 0 ... " "	" 24 " ... 9 0 0 " "

Prices of Horse, Pony, and Donkey Machines, including patent self-delivery box; cross stay complete; suitable or attaching to ordinary chaise-traces or gig harness.

To cut 26 inches ... £13 0 0 ... } Leather Boots for	To cut 30 inches ... £21 0 0 } Leather Boots for
" 28 " ... 15 0 0 ... } Donkey, 18s.	" 36 " ... 24 0 0 } Pony, 22s.
" 30 " ... 17 0 0 ... }	" 42 " ... 27 0 0 } Leather Boots for
	" 48 " ... 30 0 0 } Horse, 26s.

The 26, 28, and 30 inches can easily be worked by a donkey, or by two men, on an even lawn, the 30 and 36 inches by a pony, and 42 and 48 inches by a carriage horse; and, as the Machines make no noise in working, the most spirited animal can be employed without fear of its running away, or in any way damaging the Machine.

Both the Horse, Pony, Donkey, and Hand Machines possess (over all other Makers) the advantages of self-sharpening: the cutters being steel on each side, when they become dull or blunt by running one way round the cylinder, can be reversed again and again, bringing the opposite edge of the cutter against the bottom blade, when the Machine will cut equal to new. Arrangements are made that the cylinder can be reversed, by any unexperienced person, in two or three minutes.

The above Machines are made from the best materials, and of superior workmanship; are delivered Carriage Free to all the principal Railway Stations and Shipping Ports in England.

# GREEN'S IMPROVED NEW PATENT ROLLER,

FOR

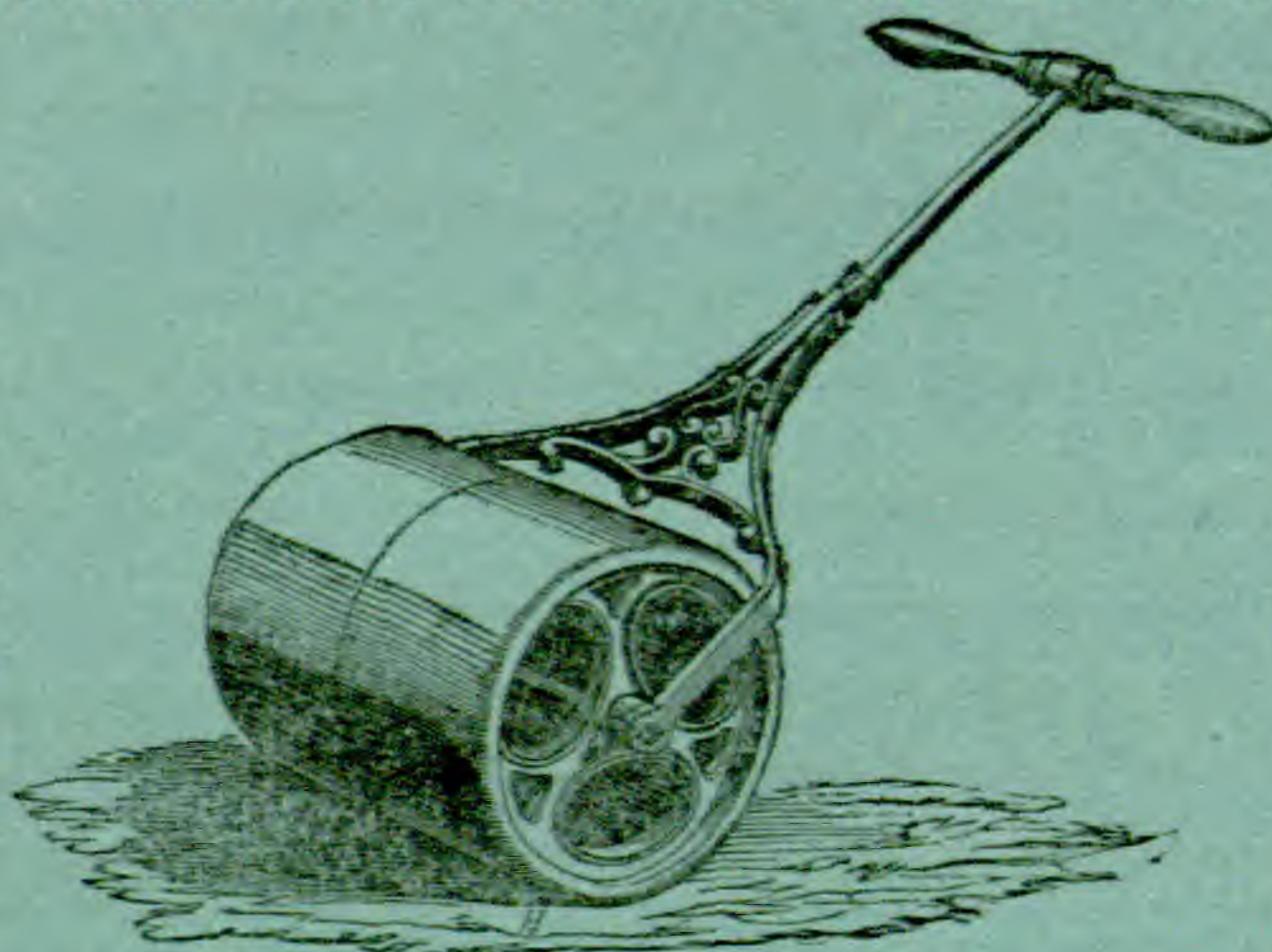
LAWNS, DRIVES, BOWLING GREENS, CRICKET FIELDS, AND GRAVEL PATHS.  
SUITABLE FOR HAND OR HORSE POWER.

## PRICES OF

## HAND ROLLERS.

Delivered at the principal  
Railway Stations in England.

Diam. 30 in., len. 32 in. £7 10
" 24 " 26 " 4 10
" 20 " 22 " 3 10
" 16 " 17 " 2 15



## PRICES OF

## ROLLERS FITTED WITH SHAFTS

Suitable for Pony or Horse  
Power.

Diam. 30 in., len. 32 in. £10 0
" 30 " 36 " 10 15
" 30 " 42 " 11 15
" 30 " 48 " 13 10
" 30 " 60 " 15 10
" 30 " 72 " 17 10
" 80 " 84 " 19 10

Thomas Green & Son, Smithfield Iron Works, Leeds; 44 & 45, Blackfriars Road, London, S.; and 19, Eden Quay, Dublin.



# HEATING BY HOT WATER.

---

It is now generally admitted that Buildings of any kind can be more effectually warmed by Hot Water than by any other means; but as so much depends on the way in which the Apparatus is fixed, it is of the greatest importance that it be done by experienced men.

J. JONES & SONS are prepared to estimate for Warming, to any extent—

GREENHOUSES.  
CONSERVATORIES.  
VINERIES.  
HOTHOUSES.  
FORCING PITS.  
PEACH HOUSES.  
PINE STOVES.  
ORCHARD HOUSES.

CHURCHES.  
CHAPELS.  
SCHOOLS.  
READING ROOMS.  
LECTURE ROOMS.  
BILLIARD ROOMS.  
HALLS AND PASSAGES.  
BATHS.

FACTORIES.  
OFFICES.  
WORKSHOPS.  
WAREHOUSES.  
DRYING ROOMS.  
CELLARS.  
COACH-HOUSES.  
HARNESS ROOMS.

J. JONES & SONS' Apparatus is simple in construction, moderate in cost, and economical in working.

It is equally available for the Amateur's Greenhouse, or the longest range of Forcing Houses; for the smallest Chapel or the largest Church; for Private Offices, or those of Public Companies.

It is admirably adapted for Dwelling Houses, as coils of pipes can be placed in any part, for warming the various rooms. One or more Baths may be heated from the same boiler, and a constant supply of hot water obtained in any part of the house.

For Warehouses and Workshops this system of heating is unsurpassed, as it is not only the means of keeping goods dry, but it also adds to the comfort of the workpeople, and thereby effects a saving in labour.

J. JONES & SONS recommend boilers of all kinds being set in brickwork, if possible; but portable boilers can be supplied, if required.

---

**MATERIALS.**—All Materials supplied will be of the best quality.

**DELIVERY.**—Boilers of various kinds, and pipes and connections, being always in stock, can, at a very short notice, be sent to any part.

**FIXING.**—The Fixing will be done by experienced men, fully capable of finishing properly any work they may undertake; and J. JONES & SONS are prepared to guarantee the effectual working of any apparatus fixed by their own men.

**ESTIMATES.**—Plans and Estimates will be sent on application.

---

**J. JONES & SONS,**  
**IRON MERCHANTS AND HORTICULTURAL ENGINEERS.**  
6, BANKSIDE, SOUTHWARK, LONDON, S.E.



Third Series.

No. 270.

VOL. XXIII. JUNE.

[Price 3s. 6d. col<sup>d</sup>. 2s. 6d. plain.]

OR No. 965 OF THE ENTIRE WORK.

CURTIS'S  
BOTANICAL MAGAZINE,

COMPRISING

THE PLANTS OF THE ROYAL GARDENS OF KEW,  
AND OF OTHER BOTANICAL ESTABLISHMENTS IN GREAT BRITAIN,  
WITH SUTTABLE DESCRIPTIONS;

BY

JOSEPH DALTON HOOKER, M.D., F.R.S. L.S. & G.S.,  
Director of the Royal Botanic Gardens of Kew.



~~~~~  
Nature and Art to adorn the page combine,  
And flowers exotic grace our northern clime.  
~~~~~

LONDON:  
REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.  
1867.



# SHANKS' NEW PATENT LAWN MOWERS FOR 1867.

*Patronized on Five occasions, during the Season of 1864, by*

**HER MAJESTY THE QUEEN,**

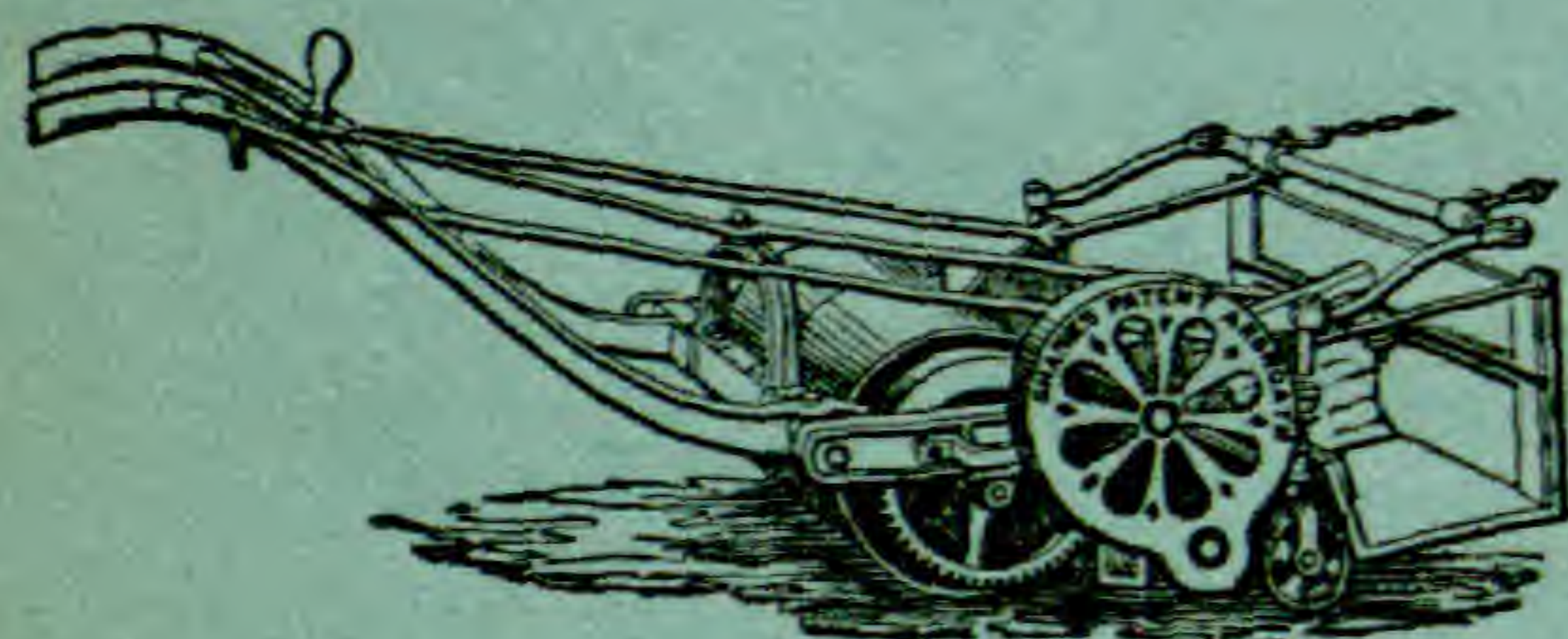
**AND ONCE BY HIS MAJESTY THE KING OF SAXONY;**

**DURING THE SEASON OF 1865 THEY WERE PATRONIZED ON FOUR OCCASIONS BY HER MAJESTY THE QUEEN;**

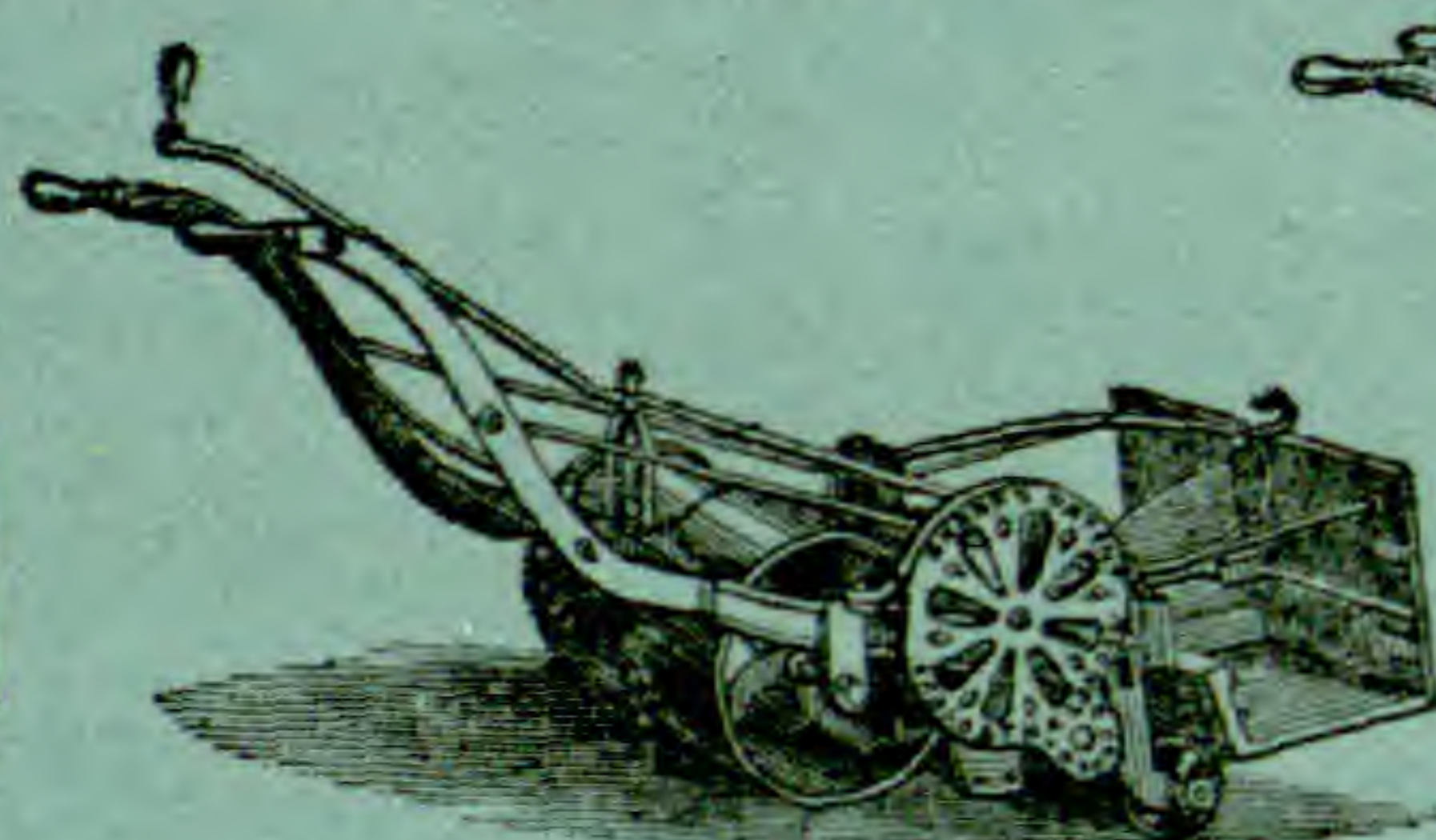
**ONCE BY HIS MAJESTY THE KING OF HOLLAND;**

**AND ONCE BY HIS MAJESTY THE KING OF PRUSSIA;**

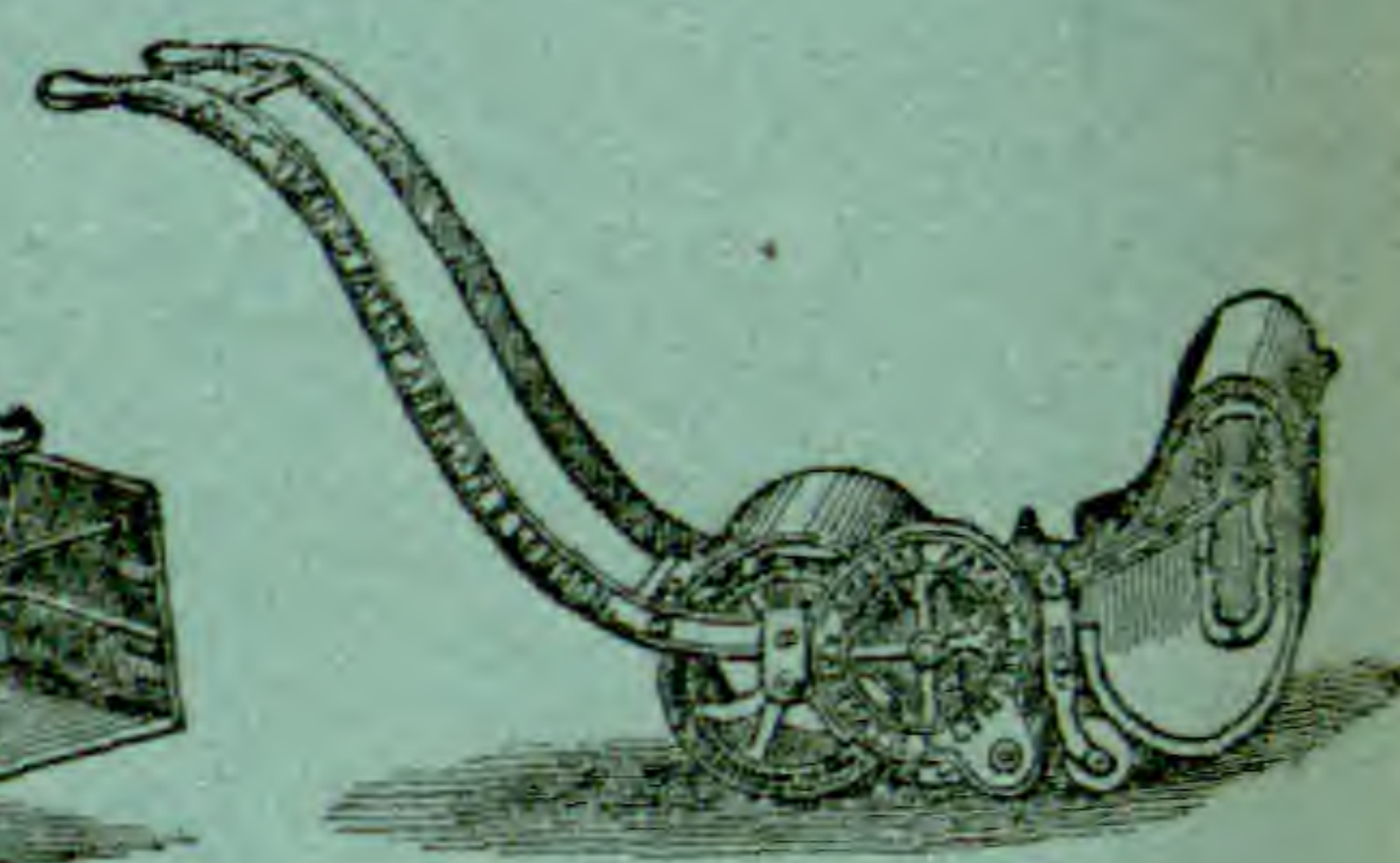
**AGAIN, DURING THE SEASON OF 1866, THEY WERE PATRONIZED ON FOUR OCCASIONS BY HER MAJESTY THE QUEEN.**



HORSE MACHINE.



PONY MACHINE.



HAND MACHINE.

ALEXANDER SHANKS & SON, in presenting their LAWN MOWERS for the Season of 1867, are gratified to be able to state that the demand for their celebrated Machines rapidly increases every year. The success which attended SHANKS' Machines during last Season is quite unparalleled in the history of the Lawn Mower.

A. S. & SON can confidently assure their numerous Friends and Customers and the Public generally that their endeavour will always be to supply a Machine, first-class in every way, one which cannot be surpassed if even equalled, whether for simplicity of construction, ease in working, or durability. None but the best materials and skilled workmen are employed in the manufacture of their Machines.

**PRICES**—Including Carriage to most of the principal Railway Stations and Shipping Ports in the Kingdom.

## SHANKS' NEW PATENT HAND MACHINE FOR 18.

10-inch Machine.....£3 10 0	} Easily worked by a Lady. Do. by a Boy. Do. by a Man.	19-inch Machine.....£7 12 6	{ Do. by a Man and a Boy. Do. by Two Men.
12-inch Machine.....4 10 0		22-inch Machine.....8 7 6	
14-inch Machine.....5 10 0		24-inch Machine.....8 17 6	
16-inch Machine.....6 10 0			

Silent Movement for the four smallest sizes, 4s. extra; for the other sizes, 7s. 6d. extra.

## SHANKS' NEW PATENT PONY & DONKEY MACHINE.

Width of Cutter.	If with Patent Delivering Apparatus.
25-inch Machine.....£12 10 0	25s. extra.
28-inch Machine.....14 10 0	30s. extra.
30-inch Machine.....15 15 0	30s. extra.

Silent Movement, 12s. 6d. extra.

## SHANKS' NEW PATENT HORSE MACHINE.

Width of Cutter.	If with Patent Delivering Apparatus.
30-inch Machine.....£19 0 0	30s. extra.
36-inch Machine.....22 0 0	30s. extra.
42-inch Machine.....26 0 0	40s. extra.
48-inch Machine.....28 0 0	40s. extra.

Silent Movement, 20s. extra.

SHANKS' PATENT LAWN MOWERS cut the Grass on uneven as well as on level Lawns; and it is quite immaterial whether the Grass be wet or dry.

*Every Machine warranted to give ample satisfaction, and if not approved of, can be at once returned.*

# ALEXANDER SHANKS & SON,

## 27, LEADENHALL STREET, LONDON.

## MANUFACTORY, DENS IRONWORKS, ARBROATH.

A. S. and SON keep a Stock of Lawn Mowers at 27, Leadenhall Street, London, from which Orders can be at once executed. They also have at their London Warehouse a staff of experienced Workmen thoroughly acquainted with all the details of these Machines, so that they are enabled to repair Lawn Mowers in London as well as at the Manufactory.



# BOTANICAL MAGAZINE ADVERTISER.

## CHOICE SEEDS.

WILLIAM CUTBUSH AND SON strongly recommend the following:—

PRIMULA SINENSIS FIMBRIATA, of the finest possible strain, Red, White, or mixed, 2s. 6d., 3s. 6d., and 5s. per packet.

CALCEOLARIA, saved from James's choice strain, very fine, 2s. 6d., 3s. 6d., and 5s. per packet.

CINERARIA from named flowers, 2s. 6d., 3s. 6d., and 5s. per packet.

SNOW'S WINTER WHITE BROCCOLI, true, W. C. & Son's own saving, 2s. 6d. per packet.

NUNEHAM PARK ONION, 2s. 6d. per packet.

For other Choice Seeds see Catalogue, Post-free.

HIGHGATE NURSERIES, LONDON, N.

## NEW ZONAL PELARGONIUMS.

DOWNIE, LAIRD, AND LAING most respectfully announce that they will send out the following splendid varieties, which have been so much admired, and have received the highest awards wherever shown, including First-class Certificates at the Royal Horticultural Society. The following extract is from the 'Journal of Horticulture,' July 17, 1866:—"There are so many good Nosegays, and so much alike, that it requires something quite new in colour to surpass them, or, in many cases, to equal them. The large bold truss of Stella and Le Grand, or the KING OF THE NOSEGAYS, must be the models of perfection in this class of flowers."

KING OF THE NOSEGAYS.—Bright orange-scarlet. Very large truss, dwarf habit. Very free and most effective variety. 7s. 6d. each.

MRS. LAING (NOSEGAY).—Glowing carmine-scarlet. Very dwarf, free, and most effective as a bedder. A beautiful and distinct variety. 5s. each.

MRS. MENZIES.—Bright rosy-salmon. Flowers perfect, good habit, free, and very fine. 5s. each.

SAMBO.—Very dark glossy scarlet, of great substance. Flowers of the finest form. Very large, compact, globular truss; quite distinct from all others. 7s. 6d. each.

Ready second week in May.

STANSTEAD PARK NURSERY, FOREST HILL, S.E.

EDGINGTON'S GARDEN NETTING, the cheapest and most durable, 1d. per square yard, or in Quantities of 250, 500, or 1000 Yards, carriage free.

EDGINGTON'S RICK CLOTHS for Sixty-two Years have maintained their celebrity as the best.

EDGINGTON'S MARQUEES and GARDEN TENTS are the prettiest.

EDGINGTON'S MARQUEES, for hire, are the most handsome and capacious.

HAYTHORN'S and WALLER'S NETTINGS. Samples and material free on application.

Be particular—FREDERICK EDGINGTON and Co., Thomas Street, Old Kent Road, London, S.E.

A Liberal Discount to the Trade!

International Exhibition, 1862, Class XIX. Honourable Mention.

## CATALOGUES FOR 1867.



## JAMES VEITCH AND SONS

BEG TO ANNOUNCE THAT THE FOLLOWING

### NEWLY-PRINTED CATALOGUES ARE NOW READY,

and will be forwarded Post Free on application:—

CATALOGUE of NEW PLANTS for the PRESENT YEAR.

CATALOGUE of GENERAL COLLECTION of STOVE and GREENHOUSE PLANTS, ORCHIDS, FERNS, etc.

CATALOGUE of SOFT-WOODDED and BEDDING PLANTS.

Each Catalogue contains Lists of the most distinct and popular Plants in their respective classes.

ROYAL EXOTIC NURSERY, KING'S ROAD, CHELSEA, S.W.



**NEW TRICOLORED GERANIUMS.**

F. AND A. SMITH'S CATALOGUE FOR 1867, containing Descriptions of their Splendid Varieties of the above, which have obtained the following awards:—

Two £5 Prizes for the Collection .....		Crystal Palace.
A Prize for the Collection.....	Liverpool.	Five Certificates..... Peterborough.
A Prize for the Collection.....	Manchester.	Five Certificates ..... Nottingham.
A Prize for the Collection.....	Leicester.	Six Certificates ..... Brighton.
A Prize for the Collection.....	Birmingham.	One Certificate ..... International.

May now be had on application.

DULWICH, SURREY.

**NEW BICOLORED AND ZONALE GERANIUMS.**

F. AND A. SMITH'S CATALOGUE FOR 1867 is now ready, containing Descriptions of the above, which have obtained Thirteen Certificates.

DULWICH, SURREY.

**NEW ROSES, 1867.**

F. AND A. SMITH'S DESCRIPTIVE CATALOGUE of the above may be had on application. Strong seasoned Plants now ready.

DULWICH, SURREY.

**BENJAMIN EDGINGTON**

MARQUEE, TENT, RICK-CLOTH, AND FLAG MANUFACTURER,

BY SPECIAL APPOINTMENT TO HER MAJESTY  
AND H.R.H. THE PRINCE OF WALES.



MARQUEES & TENTS FOR HORTICULTURAL SHOWS  
FOR SALE OR HIRE.

*Rick Cloths, New and Second-hand, with Poles, etc., complete.*



TANNED NETTING FOR FRUIT TREES, NEW AND REPAIRED.

SCRIMS FOR GREENHOUSE BLINDS, FRIGI DOMO, ETC.

*An Illustrated Catalogue Free by Post.*

Be particular to observe the Christian Name, **BENJAMIN EDGINGTON** (only),  
2, DUKE STREET, LONDON BRIDGE, S.E. No other Establishment.

**NEW WORKS NOW READY.**

- THE EDIBLE MOLLUSKS OF GREAT BRITAIN AND IRELAND. With Recipes for Cooking them. By M. S. LOVELL. Crown 8vo, 12 coloured plates, 8s. 6d.
- SECOND CENTURY OF ORCHIDACEOUS PLANTS. By JAMES BATEMAN, Esq. Part VIII., royal 4to, 10 coloured plates, 10s. 6d.
- THE BOTANICAL MAGAZINE. Edited by Dr. HOOKER, Third Series, No. 270, June, 6 coloured plates, 3s. 6d.
- THE FLORAL MAGAZINE. Edited by the Rev. H. HONYWOOD DOMBRAIN. No. 86, June, 4 coloured plates, 2s. 6d.
- MONOGRAPH OF ODONTOGLOSSUM. By JAMES BATEMAN, Esq. Part IV., Imp. folio. 5 coloured plates, £1. 1s.
- GUIDE TO COOL-ORCHID GROWING. By JAMES BATEMAN, Esq., F.R.S., Author of 'The Orchidaceæ of Mexico and Guatemala.' Woodcuts, 1s.
- BRITISH FERNS; an Introduction to the Study of the Ferns, Lycopods, and Equiseta indigenous to the British Isles. With Chapters on the Structure, Propagation, Cultivation, Diseases, Uses, Preservation, and Distribution of Ferns. By MARGARET PLUES. Crown 8vo, 16 coloured plates, drawn expressly for the work, by W. FITCH, and 56 Wood-Engravings, 10s. 6d.
- BRITISH GRASSES; an Introduction to the Study of the Gramineæ of Great Britain and Ireland. By M. PLUES. Crown 8vo, 16 coloured plates and 100 wood-engravings, 10s. 6d.

REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.







AMARYLLIS PARDINA.

*Spotted-flowered Amaryllis.*

Nat. Ord. AMARYLLIDÆ.—HEXANDRIA MONOGYNIA.

*Gen. Char.* *Perianthii* tubus brevis v. 0, limbi subringentis lobis subæqualibus recurvis, fauce sæpius squamulosa. *Stamina* 6, fauce perianthii inserta, filamentis liberis erectis v. declinatis; antheræ versatiles. *Ovarium* 3-loculare; stylus elongatus, staminum directione, stigmate simplici v. 3-fido; ovula plurima. *Capsula* membranacea, oblongo-3-gona v. depressa, 3-locularis, 3-valvis. *Semina* plurima, globosa, compressa, marginata v. alata, v. interdum abortu solitaria, carnosio-baccata, loculum v. capsulam implens.—*Herbæ* tropicæ et subtropicæ, *bulbo tunicato*. *Folia scapo coætanea v. serotina*. *Spatha* 2-valvis, 1-∞-flora.

AMARYLLIS (§ *Hippeastrum*) *pardina*; elata, foliis bifariis flore coætaneis late linearibus obtusis scapo robusto glauco basi rubro maculato brevioribus, spathis 2-floris, perianthii 5-7 poll. diam. subinfundibuliformis tubo brevissimo intus fimbriato, lobis subæqualibus ovato-oblongis acutis pallide stramineis creberrime miniato-punctatis, staminibus declinatis subæqualibus, stigmate obscure 3-lobo.

A truly magnificent plant, discovered in Peru by Mr. Pearce, collector to Messrs. Veitch, of the Royal Exotic Nurseries, Chelsea, by whom it was flowered in March of the present year. It is certainly the most striking species of the genus known to me, and even Mr. Fitch's skill has failed to give full effect to the dazzling contrast of the bright vermilion spots on the translucent substance of the perianth. It is a stove plant of easy cultivation, and a worthy rival of the more temperate *Lilium auratum*.

The genus *Hippeastrum*, of Herbert, which includes many American species of *Amaryllis*, differs from this latter by such very slight and variable characters, that it cannot be regarded as of any practical value, and I therefore follow Endlicher in regarding it, together with its allies *Zephyranthes*, *Nerina*, *Vallota*, etc., as sections of the great and widely diffused and very natural genus *Amaryllis*.

DESCR. *Bulb* clothed with pale brown, membranous scales.

JUNE 1ST, 1867.



*Leaves* bifarious, recurved, appearing with the flowers, and then eight to ten inches long, by an inch and a half broad, pale green, linear or narrow-linear, oblong, obtuse, not striated. *Scape* as thick as the little finger, twelve to eighteen inches high, contracted at the apex, glaucous-green, speckled with red at the base. *Spathe* two-flowered; leaflets about as long as the pedicels, one to two inches, linear, membranous. *Ovary* short, green. *Perianth* five to seven inches in diameter; tubes very short, fimbriate inside; lobes broadly ovate-oblong, acute, spreading and recurved, nearly equal, pale straw-coloured, profusely covered with vermilion spots, verdigris-green at the base, with a dark purple band at their insertion. *Stamens* nearly equal, declinate; anthers green. *Stigma* very obscurely three-lobed.—*J. D. H.*

---

Fig. 1. Ovary, base of perianth, and stamen. 2. Transverse section of ovary:—*magnified*.





W. Fitch, del et lith.

Vincent Brooks, Imp.



TAB. 5646.

BLETIA SHERRATTIANA.

*Sherratt's Bletia.*

Nat. Ord. ORCHIDÆ.—GYNANDRIA MONANDRIA.

*Gen. Char. (Vide supra, TAB. 3319.)*

BLETIA *Sherrattiana*; pseudobulbis depressis, foliis 3-4-plicatis utrinque acuminatis, scapis simplicibus apice racemosis subbrevioribus, floribus intense roseis, bracteis acuminatis ovario brevioribus, sepalis oblongo-lanceolatis obtuse acutis, petalis duplo latioribus, labelli trifidi lobis lateralibus apertis rotundatis maximis planis, intermedio multo minore reniformi medio apiculato, lamellis 3 aureis parallelis totum axim labelli percurrentibus. Columna clavata, arcuata, haud conspicue alata. —*Bateman.*

This, which is perhaps the prettiest of the true Bletias, is a native of New Granada, whence the Messrs. Low imported it about the year 1864. In its habit it is so similar to the old and well-known *B. verecunda* that it was quite a surprise to me when the spikes of bright-rosy flowers showed themselves in all their distinctness and beauty. As the plant is quite new, I have named it after my gardener, Mr. Sherratt, who almost from a child has been specially devoted to Orchids.

As regards culture that, of course, is of the simplest character. Being terrestrial, it requires a large pot, and being found at a lower level than most of the New Granada species, it can scarcely be classed among "cool" Orchids. The Cattleya or intermediate house seems to suit it well.

DESCR. *Pseudobulbs* flattened, about two inches across. *Leaves* three or four, plicated, acuminate at either end, raised upon an upright, greenish stalk, including which they are nearly a yard long. *Bracts* acuminate, shorter than the ovaries. *Flowers* of a very delicate texture, a dozen or more in a somewhat dense terminal mass, bright rose-colour. *Sepals* about an inch long, oblong-lanceolate, bluntish. *Petals*

JUNE 1st, 1867.



twice as broad, rounded. *Lip* longer than the petals, deeply three-cleft, the lateral lobes being thrown wide open and rounded, very much larger than the intermediate one, which is kidney-shaped, emarginate, and apiculate. Three parallel golden lamellæ traverse the entire length of the axis of the lip, from whence a network of veins radiates. *Column* arched, clavate, much shorter than the lip.—*J. B.*

---

Fig. 1. Lip spread flat. 2. Column. 3. Side view of pollen-masses.  
4. Front view of ditto:—*magnified.*





W. Fitch, del. et lith.

Vincent Brooks, Imp.



TAB. 5647.

BILLBERGIA SPHACELATA.

*Chupon of Chili.*

Nat. Ord. BROMELIACEÆ.—HEXANDRIA MONOGYNIA.

Gen. Char. (*Vide supra*, TAB. 5502.)

*BILLBERGIA sphacelata*; caule brevi robusto, foliis numerosis carnosio-congestis 4-5-pedalibus anguste ensiformi-lanceolatis concavis viridibus remotiuscule spinulosis, floribus in capitulum axillare sessile dense congestis, bracteis subulatis spinuloso-serratis medio sphacelatis, sepalis dimidiato-lanceolatis acuminatis integris v. uno latere 1-dentatis, petalis erectis obtusis basi intus 2-tuberculatis, filamentis breviusculis compressis, antheris apiculatis, stigmatibus lineari-subulatis vix tortis.

*BROMELIA sphacelata*. Ruiz et Pav. Prodr. v. 3. p. 32. Gay, Fl. Chili, v. 6. p. 8.

*GREIGIA sphacelata*. Regel, Gartenflora, v. 14. p. 137. t. 474.

This very handsome Bromeliaceous plant, conspicuous for its magnificent crown of leaves, each from four to five feet long, flowered in the Royal Gardens, Kew, in October, 1866, from specimens sent by Dr. Regel from the Imperial Botanic Gardens of St. Petersburg. Though not altogether corresponding with the *Greigia sphacelata* described and figured by Dr. Regel in the 'Gartenflora,' I can hardly doubt its being that plant, both from its origin and habitat. The differences are that Regel's plant is represented as having obtuse anthers, whereas in the Kew plant the anthers are strongly mucronate. In Ruiz and Pavon's description the flowers are said to be purple, which is not the case with our plant.

*Billbergia sphacelata* is a native of temperate Chili, near Concepcion, in lat. 37° S., where it is called Chupon, and the sweet pulpy fruits, which are greedily eaten by children, are called Chupones.

DESCR. *Stem* very short. *Leaves* numerous, densely crowded, bright green and shining, erecto-patent and recurved,

JUNE 1ST, 1867.

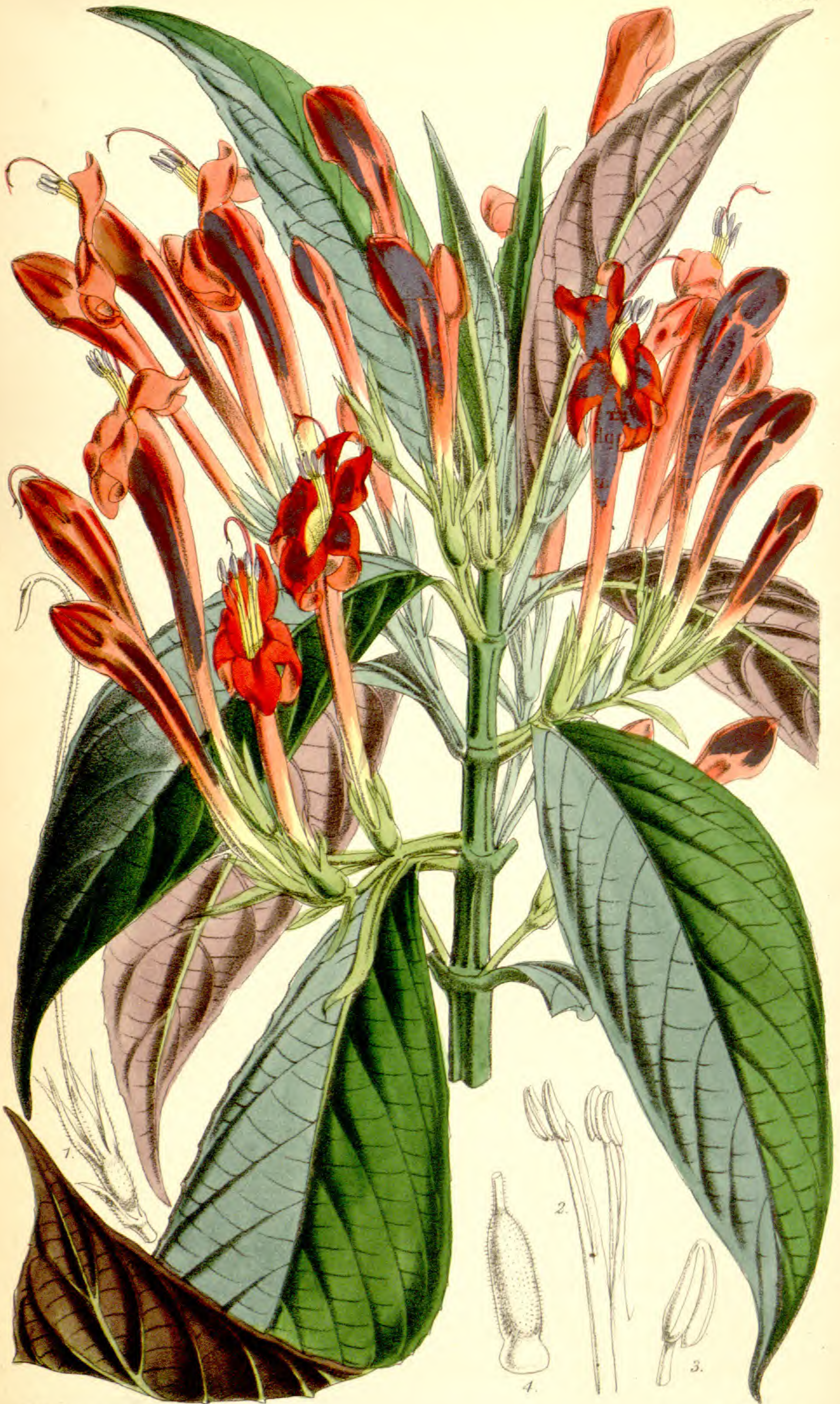


four to five feet long, dark-green, narrow-lanceolate ensiform, one inch broad, concave, not keeled nor striate, with rather distant spines on the margins, which are recurved, gradually tapering to the acuminate apex. *Head of flowers* axillary, short, very many-flowered, sunk amongst the leaves near the crown or at the side of the stem, much depressed. *Bracts* longer than the flowers, erect subulate-lanceolate, spinous-ciliate, whitish, with greenish tips, and brown across the middle. *Flowers* pale rose-red, an inch and a half long. *Ovary* smooth. *Sepals* dimidiate-lanceolate, with often a deep tooth on one side. *Corolla* tube rather shorter than the linear-oblong, obtuse lobes, which have a thickened two-lobed scale or two tubercles at the base. *Filaments* subulate, compressed. *Anthers* linear, with a terminal mucro. *Stigmas* three, linear-subulate, hardly twisted.—*J. D. H.*

---

Fig. 1. Flower. 2. Corolla tube, lobe, and stamens. 3. Germen:—all slightly magnified.







STEMONACANTHUS PEARCEI.

*Mr. Pearce's Stemonacanthus.*

Nat. Ord. ACANTHACEÆ.—DIDYNAMIA ANGIOSPERMIA.

*Gen. Char.* Calyx profunde 5-fidus, æqualis. Corollæ tubus elongatus, curvus, sensim ampliatus; limbus ringens, 2-labiatus, 6-lobus, lobis patentibus v. reflexis. Stamina 4, exserta, infra os tubi inserta, filamentis per paria connatis; antheræ oblongæ, 2-loculares, loculis contiguis. Stigma 2-fidum, lobis angustis. Capsula basi contracta, asperma, superne 4-8-sperma. Semina planiuscula, retinaculis suffulta.—Suffrutices Americani. Folia opposita v. inferiora 3-na. Inflorescentia axillaris v. terminalis, laxa v. densa. Bractæ parvæ v. angustæ. Flores coccinei, ebracteolati v. 2-bracteolati.

STEMONACANTHUS *Pearcei*; caule acute 4-gono, foliis breviter petiolatis lanceolatis longe acuminatis obtuse serratis glaberrimis subtus fusco-purpureis, paniculis axillaribus paucifloris, pedunculis petiolis paulo longioribus, calycis pilosuli lobis subulatis, corollæ 2-2½-pollicaris tubo gracile lobis revolutis, ovario glanduloso.

Of the beautiful American Acanthaceous genus *Stemonacanthus*, very few species have hitherto been introduced into this country, though our herbaria contain several that are eminently worthy of cultivation. But one, *S. macrophyllus*, (Tab. nostr. 4448,) has been figured previously in this Magazine; it resembles the present in habit and general characters, but has a much more lax inflorescence.

*S. Pearcei* is a stove plant, native of Bolivia, where it was discovered by Messrs. Veitch's able collector, whose name it bears, and flowered in the Royal Exotic Nurseries in March of the present year. I find no described species near it in characters, but think it possible that it may be identical with *Arrhostoxylum Hænkeanum*, Nees (in DC. Prod. v. 11, t. 211), which, though placed by its author in a genus which differs from *Stemonacanthus* chiefly in the obtuse calyx-lobes, is nevertheless itself described as having subulate calyx-lobes.

DESCR. An erect, glabrous undershrub. Branches acutely quadrangular, stout. Leaves shortly petioled, five to six inches

JUNE 1st, 1867.



long, lanceolate, long-acuminate, obtusely serrate, green above, brown-purple below, with very prominent veins. *Peduncles* axillary, patent, few-flowered, rather longer than the petioles. *Bracts* linear; *bracteoles* none, or one or two subulate. *Calyx* half to three-fourths of an inch long, divided below the middle into subulate, erect lobes. *Corolla* scarlet, two to two and half inches long, erect; *tube* slender, slightly curved, gradually dilated upwards, compressed; *lobes* recurved or revolute. *Anthers* shortly oblong, two-celled; *cells* contiguous, red-purple. *Ovary* glandular.—*J. D. H.*

---

Fig. 1. Calyx and bracteole. 2. Stamens. 3. Anther. 4. Ovary:—*all magnified.*







DENDROBIUM MACROPHYLLUM; var. *Veitchianum*.

*Large-leaved Dendrobe; Veitch's var.*

Nat. Ord. ORCHIDÆ.—GYNANDRIA MONANDRIA.

Gen. Char. (*Vide supra*, TAB. 4755.)

DENDROBIUM *macrophyllum*; caulibus basi teretibus superne clavatis profunde sulcatis 2-3-phyllis, foliis sessilibus oblongis apice oblique 2-fidis v. emarginatis, racemo terminali erecto elongato apice nutante multifloro, bracteis membranaceis acutiusculis, pedicellis sepalisque ovato-oblongis extus hirsutis, petalis spathulatis acutis flavidis, labello magno 3-lobo, lobis lateralibus adscendentibus reniformibus purpureo-flabellatim striolatis, intermedio transverse dilatato convexo flabellatim maculato obscure 3-dentato.

DENDROBIUM *macrophyllum*. *A. Rich. Sert. Astrolab. p. 22. t. 6.*

Var. *Veitchianum*; foliis minoribus. *D. Veitchianum. Lindl. Bot. Reg. 1847, sub. t. 25.*

The true *D. macrophyllum* of A. Richard, a native of New Guinea, is one of the finest of Orchids, having leaves upwards of a foot long and a spike twice as long: the plant here introduced differs only in the smaller leaf from Richard's figure and description, and is clearly a variety of that species. It was named after its introducers, Messrs. Veitch, by Dr. Lindley, who seems to have overlooked Richard's plant, or he would surely otherwise have alluded to it as a close ally at any rate. Our specimen of var. *Veitchianum* was flowered by Messrs. Backhouse, of York, in February of the present year, and I am indebted to my friend Dr. Reichenbach for its identification, as also for the information that *D. ferox*, of Hasskarl, is another of its many varieties, which inhabit the Javan and Sumatran hills.

The var. *Veitchianum* is a native of Java, whence it was sent to England by the late Mr. Thomas Lobb, one of the most indefatigable and successful of Messrs. Veitch's collectors. It inhabits the hottest jungles of the hottest climate in

JUNE 1st, 1867.



the globe, and must be treated accordingly, and even then, as Mr. Bateman informs me, it is difficult to flower.

DESCR. *Stems* tufted, eight to twelve inches high, terete and as thick as a goose-quill below, expanding upwards into a club-shaped, deeply grooved pseudobulb, that bears two or three terminal or subterminal leaves. *Leaves* four to six inches long in this variety, sessile, oblong, pale green, nearly plane, unequally two-lobed at the very tip. *Raceme* a foot and upwards high, erect, nodding at the apex, many-flowered. *Bracts* linear-oblong, membranous. *Pedicels* short, nearly glabrous. *Ovary* and back of *sepals* hirsute. *Flowers* two inches in diameter. *Sepals* ovate-oblong, acute, greenish-yellow, paler inside. *Petals* smaller, spathulate, dirty-white. *Lip* large, three-lobed; lateral lobes subreniform, ascending, yellow-green with radiating purple streaks; middle lobe transversely oblong, convex, obscurely three-lobed, green, with a few radiating dotted lines.—*J. D. H.*

---

Fig. 1. Lip. 2. Column. 3, 4. Pollen :—*all magnified.*



*Just published, Crown 8vo, 12 Coloured Plates, 8s. 6d.*

THE  
EDIBLE MOLLUSKS OF GREAT BRITAIN AND IRELAND,  
WITH RECIPES FOR COOKING THEM.

By M. S. LOVELL.

*Just published, Crown 8vo, with Wood-engravings, price 7s. 6d.*

SUNSHINE AND SHOWERS:  
THEIR INFLUENCES THROUGHOUT CREATION.

A POPULAR COMPENDIUM OF METEOROLOGY, CURIOSITIES OF THE WEATHER,  
AND WEATHER WISDOM.

By ANDREW STEINMETZ, Esq.,

OF THE MIDDLE TEMPLE, BARRISTER-AT-LAW,

AUTHOR OF 'A MANUAL OF WEATHER-CASTS,' ETC. ETC.

This Work not only treats fully all the leading topics of METEOROLOGY, but especially of the use of the HYGROMETER, for which systematic RULES are now for the first time drawn up. Among other interesting and useful subjects, are chapters on RAINFALL in England and Europe in general—WET AND DRY YEARS—*Temperature and Moisture with respect to the health of Plants and Animals*—The Wonders of Evaporation—Soil Temperature—The Influence of Trees on Climate and Water Supply—THE PROGNOSTICATION OF THE SEASONS AND HARVEST—The Characteristics and Meteorology of the Seasons—Rules of the Barometer—Rules of the *Thermometer as a Weather Glass*—POPULAR WEATHER-CASTS—ANEMOMETRY—and finally, *What becomes of the Sunshine*—and *What becomes of the Showers*.

"The author has explained the subjects with a fulness never before attempted, and has introduced a variety of practical suggestions which will be useful to all classes of readers. . . . The book is written with much cleverness, and is calculated to amuse as well as instruct."—*Observer*.

*Just published, Crown 8vo, 9s.*

THE REASONING POWER IN ANIMALS.

By THE REV. J. S. WATSON.

"Full of entertainment, of instruction, and of matter suggestive of thought on that strange world of utterly mysterious life with which we come into daily contact, but of the essence of which we know scarcely anything."—*Daily News*.

*Just published, Crown 8vo, with Woodcuts and Lithographic Frontispiece, 6s.*

METEORS, AEROLITES, AND FALLING STARS.

By DR. T. L. PHIPSON.

"Dr. Phipson has earned the thanks of the public by his clear and pains-taking statement of what these facts encourage us to accept as truths of physics."—*Saturday Review*.

*In a few days will be published, Crown 8vo, 16 Coloured Plates and  
100 Wood Engravings, price 10s. 6d.*

BRITISH GRASSES:

AN INTRODUCTION TO THE STUDY OF THE GRAMINEÆ OF  
GREAT BRITAIN AND IRELAND.

WITH INTRODUCTORY CHAPTERS ON THE STRUCTURE, USES, ETC.

By M. PLUES.

REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.



# WORKS ON BOTANY.

- BENTHAM'S ILLUSTRATED BRITISH FLORA**; a Description (with a Wood-Engraving, including dissections, of each species) of the Flowering Plants and Ferns indigenous to, or naturalized in, the British Isles. 2 vols. 8vo. 1295 Wood-Engravings, from Original Drawings by W. FITCH. £3. 10s.
- BENTHAM'S HANDBOOK of the BRITISH FLORA**; a Description of the Flowering Plants and Ferns indigenous to, or naturalized in, the British Isles. For the Use of Beginners and Amateurs. 12s.
- MOORE'S FIELD BOTANIST'S COMPANION**; a Familiar Account, in the Four Seasons, of the most common of the Wild Flowering Plants of the British Isles. 24 Coloured Plates, by W. FITCH. 21s.
- BENTHAM'S OUTLINES of ELEMENTARY BOTANY**, as Introductory to Local Floras. 2s. 6d.
- HOOKER'S FLORA of NEW ZEALAND**; a Systematic Description of the Native Plants of New Zealand, and the Chatham, Kermadec's, Lord Auckland's, Campbell's, and Macquarrie's Islands. Part I., 16s. Part II., 14s., or complete in one vol., 30s. Published under the auspices of the Government of that colony.
- BENTHAM'S FLORA AUSTRALIENSIS**; A Description of the Plants of the Australian Territory. Vols. I. to III., 20s. each. Published under the auspices of the several Governments of Australia.
- GRISEBACH'S FLORA of the BRITISH WEST INDIAN ISLANDS**. 37s. 6d. Published under the auspices of the Secretary of State for the Colonies.
- BENTHAM'S FLORA HONGKONGENSIS**; a Description of the Flowering Plants and Ferns of the Island of Hongkong. With a Map of the Island. 16s. Published under the authority of Her Majesty's Secretary of State for the Colonies.
- HOOKER'S FLORA of TASMANIA**; Royal 4to, 2 vols. 200 Coloured Plates. £17. 10s. Published under the authority of the Lords Commissioners of the Admiralty.
- HOOKER on the FLORA of AUSTRALIA**, its Origin, Affinities, and Distribution. 10s.
- HOOKER'S RHODODENDRONS of SIKKIM-HIMALAYA**; being an account, Botanical and Geographical, of the Rhododendrons recently discovered in the Mountains of Eastern Himalaya, from Drawings and Descriptions made on the spot, by Dr. J. D. HOOKER, F.R.S. Folio, 30 Coloured Plates. £3. 16s.
- MOGGRIDGE'S FLORA of MENTONE**. Royal 8vo. Parts I. and II., each, 25 Coloured Plates, 15s.
- WOODS'S TOURIST'S FLORA**; Descriptive Catalogue of the Flowering Plants and Ferns of the British Islands, France, Germany, Switzerland, Italy, and the Italian Islands. 18s.
- HOOKER'S BRITISH FERNS**; Figures and Descriptions, with Analyses of the Fructification and Venation, of the Ferns of Great Britain and Ireland, systematically arranged. Royal 8vo, 66 Coloured Plates, £2. 2s.
- HOOKER'S GARDEN FERNS**; Figures and Descriptions, with Analyses of the Fructification and Venation, of a Selection of Exotic Ferns, adapted for Cultivation in the Garden, Hothouse, and Conservatory. Royal 8vo, 64 Coloured Plates, £2. 2s.
- HOOKER'S FILICES EXOTICÆ**; Figures and Descriptions of Exotic Ferns, chiefly of such as are cultivated in the Royal Gardens of Kew. Royal 4to, 100 Coloured Plates, £6. 11s.
- CHANTER'S FERNY COMBES**; a Ramble after Ferns in the Glens and Valleys of Devonshire. Second Edition. 8 Coloured Plates and a Map of the County, 5s.
- BERKELEY'S BRITISH MOSSES**, containing all that are known to be Natives of the British Isles. 24 Coloured Plates, 21s.
- BERKELEY'S BRITISH FUNGOLOGY**, containing Characters of above a Thousand Species of Fungi, and a Complete List of all that have been described as Natives of the British Isles. 24 Coloured Plates, 30s.
- BADHAM'S ESCULENT FUNGUSES of ENGLAND**, containing an Account of their Classical History, Uses, Characters, Development, Structure, Nutritious Properties, Modes of Cooking and Preserving, etc. New Edition. Edited by F. CURREY, F.R.S. 12 Coloured Plates, 12s.
- HUSSEY'S BRITISH MYCOLOGY**, comprising Figures and Descriptions of the Funguses of interest and novelty indigenous to Britain. Royal 4to. First Series, 90 Coloured Plates, £7. 12s. 6d.; Second Series, 50 Coloured Plates, £4. 10s.
- HARVEY'S PHYCOLOGIA BRITANNICA**; or, History of British Seaweeds, containing Coloured Figures, Generic and Specific Characters, Synonyms and Descriptions of all the Species of Algæ inhabiting the Shores of the British Islands. Royal 8vo, 4 vols., 360 Coloured Plates, £6. 6s.
- HARVEY'S SYNOPSIS of BRITISH SEAWEEDS**. 5s.
- HARVEY'S PHYCOLOGIA AUSTRALICA** a History of Australian Seaweeds, comprising Coloured Figures and Descriptions of the more characteristic Marine Algæ of the South Hemisphere. Royal 8vo, 5 vols., 300 Coloured Plates, £7. 13s.
- HARVEY'S NEREIS AUSTRALIS**; or, Algæ of the Southern Ocean. Imperial 8vo, 50 Coloured Plates, £2. 2s.



# GREEN'S PATENT SILENS MESSOR,

OR

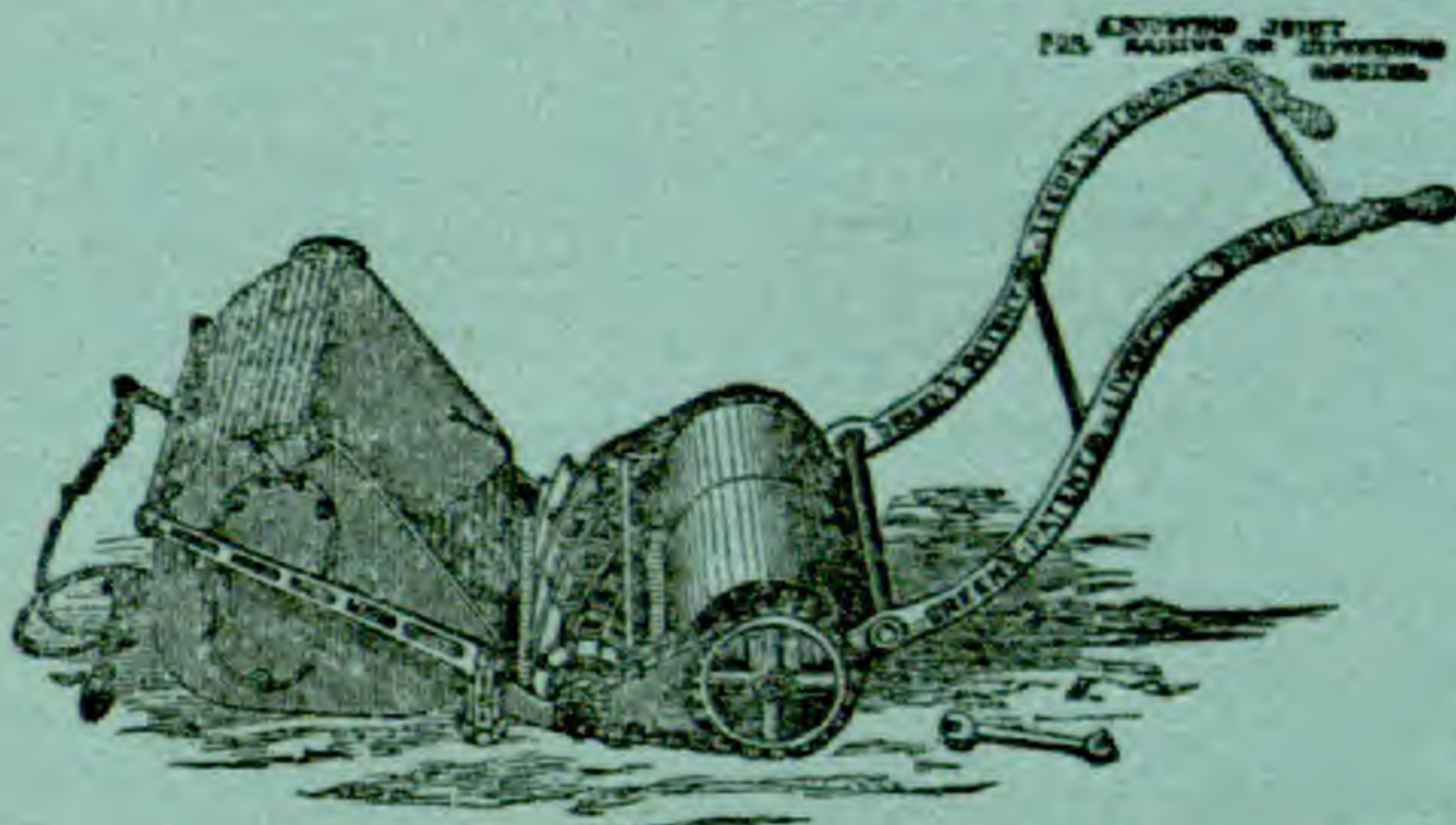
NOISELESS LAWN MOWING, ROLLING AND COLLECTING MACHINES.  
FITTED WITH PATENT SELF-SHARPENING CYLINDER CUTTERS.

By Special Appointment  
Sole Manufacturer



To Her Most Gracious  
Majesty the Queen.

Every Machine is warranted to give entire satisfaction, and if not approved of can be returned unconditionally.



Green's Patent Lawn Mowers have proved to be the best, and have carried off every prize that has been given in all cases of competition.

## PRICES OF HAND MACHINES.

To cut 10 inches ...	£3 10 0	Suitable for a Lady	To cut 18 inches ...	£7 10 0	Suitable for one person
" 12 " ...	4 10 0	"	" 20 " ...	8 0 0	Suitable for two persons
" 14 " ...	5 10 0	Suitable for one person	" 22 " ...	8 10 0	"
" 16 " ...	6 10 0	"	" 24 " ...	9 0 0	"

Prices of Horse, Pony, and Donkey Machines, including patent self-delivery box; cross stay complete; suitable or attaching to ordinary chaise-traces or gig harness.

To cut 26 inches ...	£13 0 0	Leather Boots for Donkey, 18s.	To cut 30 inches ...	£21 0 0	Leather Boots for Pony, 22s.
" 28 " ...	15 0 0		" 36 " ...	24 0 0	
" 30 " ...	17 0 0		" 42 " ...	27 0 0	
			" 48 " ...	30 0 0	Leather Boots for Horse, 26s.

The 26, 28, and 30 inches can easily be worked by a donkey, or by two men, on an even lawn, the 30 and 36 inches by a pony, and 42 and 48 inches by a carriage horse; and, as the Machines make no noise in working, the most spirited animal can be employed without fear of its running away, or in any way damaging the Machine.

Both the Horse, Pony, Donkey, and Hand Machines possess (over all other Makers) the advantages of self-sharpening: the cutters being steel on each side, when they become dull or blunt by running one way round the cylinder, can be reversed again and again, bringing the opposite edge of the cutter against the bottom blade, when the Machine will cut equal to new. Arrangements are made that the cylinder can be reversed, by any unexperienced person, in two or three minutes.

The above Machines are made from the best materials, and of superior workmanship; are delivered Carriage Free to all the principal Railway Stations and Shipping Ports in England.

## GREEN'S IMPROVED NEW PATENT ROLLER,

FOR

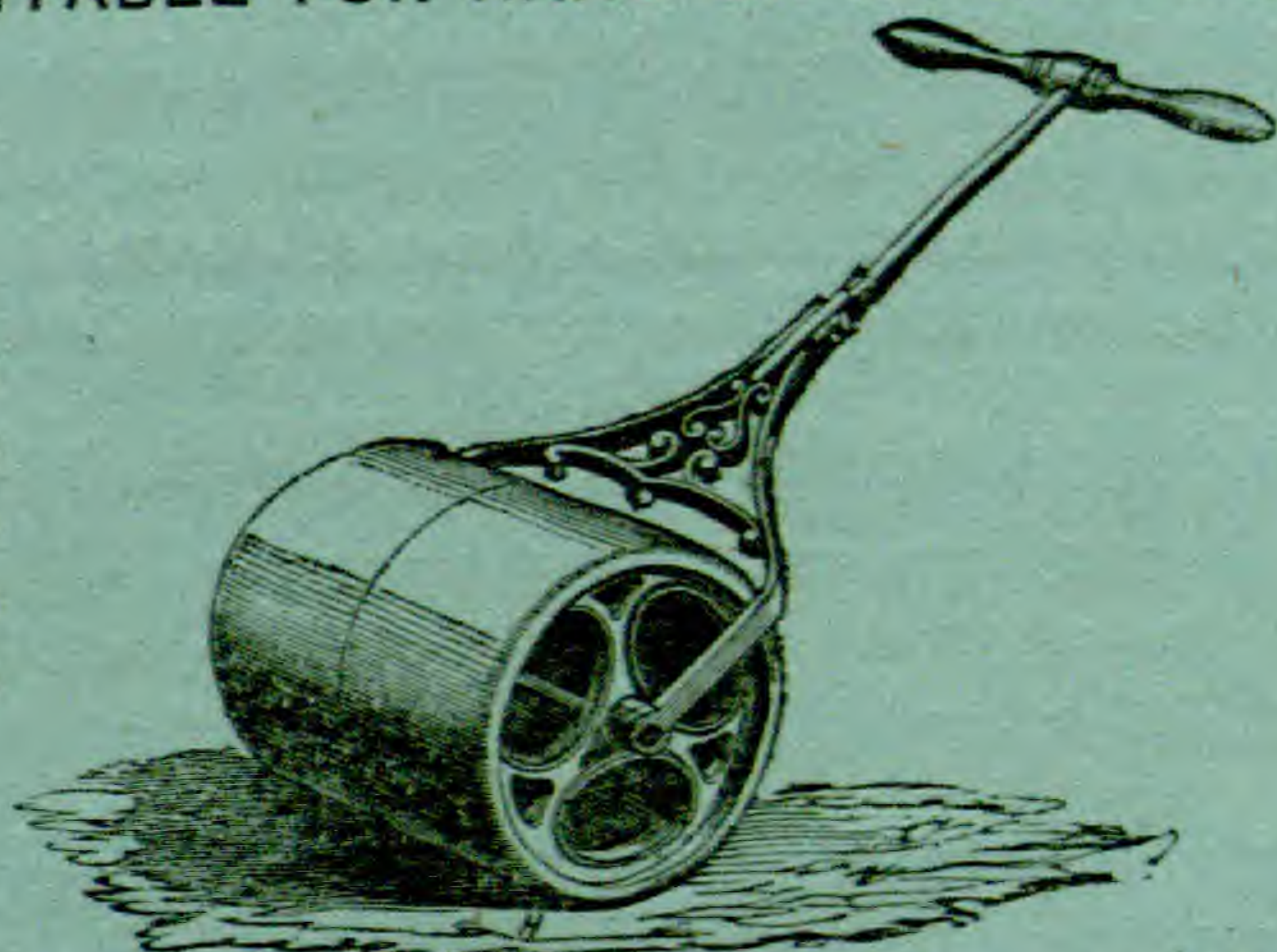
LAWNS, DRIVES, BOWLING GREENS, CRICKET FIELDS, AND GRAVEL PATHS.  
SUITABLE FOR HAND OR HORSE POWER.

### PRICES OF

### HAND ROLLERS.

Delivered at the principal  
Railway Stations in England.

Diam. 30 in., len. 32 in.	£7 10
" 24 " 26 "	4 10
" 20 " 22 "	3 10
" 16 " 17 "	2 15



### PRICES OF

### ROLLERS FITTED WITH SHAFTS

Suitable for Pony or Horse  
Power.

Diam. 30 in., len. 32 in.	£10 0
" 30 " 36 "	10 15
" 30 " 42 "	11 15
" 30 " 48 "	13 10
" 30 " 60 "	15 10
" 30 " 72 "	17 10
" 80 " 84 "	19 10

Thomas Green & Son, Smithfield Iron Works, Leeds; 44 & 45, Blackfriars Road,  
London, S.; and 19, Eden Quay, Dublin.



# HEATING BY HOT WATER.

---

It is now generally admitted that Buildings of any kind can be more effectually warmed by Hot Water than by any other means; but as so much depends on the way in which the Apparatus is fixed, it is of the greatest importance that it be done by experienced men.

J. JONES & SONS are prepared to estimate for Warming, to any extent—

GREENHOUSES.  
CONSERVATORIES.  
VINERIES.  
HOTHOUSES.  
FORCING PITS.  
PEACH HOUSES.  
PINE STOVES.  
ORCHARD HOUSES.

CHURCHES.  
CHAPELS.  
SCHOOLS.  
READING ROOMS.  
LECTURE ROOMS.  
BILLIARD ROOMS.  
HALLS AND PASSAGES.  
BATHS.

FACTORIES.  
OFFICES.  
WORKSHOPS.  
WAREHOUSES.  
DRYING ROOMS.  
CELLARS.  
COACH-HOUSES.  
HARNESS ROOMS.

J. JONES & SONS' Apparatus is simple in construction, moderate in cost, and economical in working.

It is equally available for the Amateur's Greenhouse, or the longest range of Forcing Houses; for the smallest Chapel or the largest Church; for Private Offices, or those of Public Companies.

It is admirably adapted for Dwelling Houses, as coils of pipes can be placed in any part, for warming the various rooms. One or more Baths may be heated from the same boiler, and a constant supply of hot water obtained in any part of the house.

For Warehouses and Workshops this system of heating is unsurpassed, as it is not only the means of keeping goods dry, but it also adds to the comfort of the workpeople, and thereby effects a saving in labour.

J. JONES & SONS recommend boilers of all kinds being set in brickwork, if possible; but portable boilers can be supplied, if required.

---

**MATERIALS.**—All Materials supplied will be of the best quality.

**DELIVERY.**—Boilers of various kinds, and pipes and connections, being always in stock, can, at a very short notice, be sent to any part.

**FIXING.**—The Fixing will be done by experienced men, fully capable of finishing properly any work they may undertake; and J. JONES & SONS are prepared to guarantee the effectual working of any apparatus fixed by their own men.

**ESTIMATES.**—Plans and Estimates will be sent on application.

---

**J. JONES & SONS,**

**IRON MERCHANTS AND HORTICULTURAL ENGINEERS,**

6, BANKSIDE, SOUTHWARK, LONDON, S.E.



Third Series.

No. 271.

VOL. XXIII. JULY.

[Price 3s. 6d. col<sup>d</sup>. 2s. 6d. plain.]

OR No. 966 OF THE ENTIRE WORK.

CURTIS'S  
BOTANICAL MAGAZINE,

COMPRISING

THE PLANTS OF THE ROYAL GARDENS OF KEW,  
AND OF OTHER BOTANICAL ESTABLISHMENTS IN GREAT BRITAIN,  
WITH SUITABLE DESCRIPTIONS;

BY

JOSEPH DALTON HOOKER, M.D., F.R.S. L.S. & G.S.,

Director of the Royal Botanic Gardens of Kew.



Nature and Art to adorn the page combine,  
And flowers exotic grace our northern clime.

LONDON:

REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

1867.



# SHANKS' NEW PATENT LAWN MOWERS FOR 1867.

*Patronized on Five occasions, during the Season of 1864, by*

**HER MAJESTY THE QUEEN,**

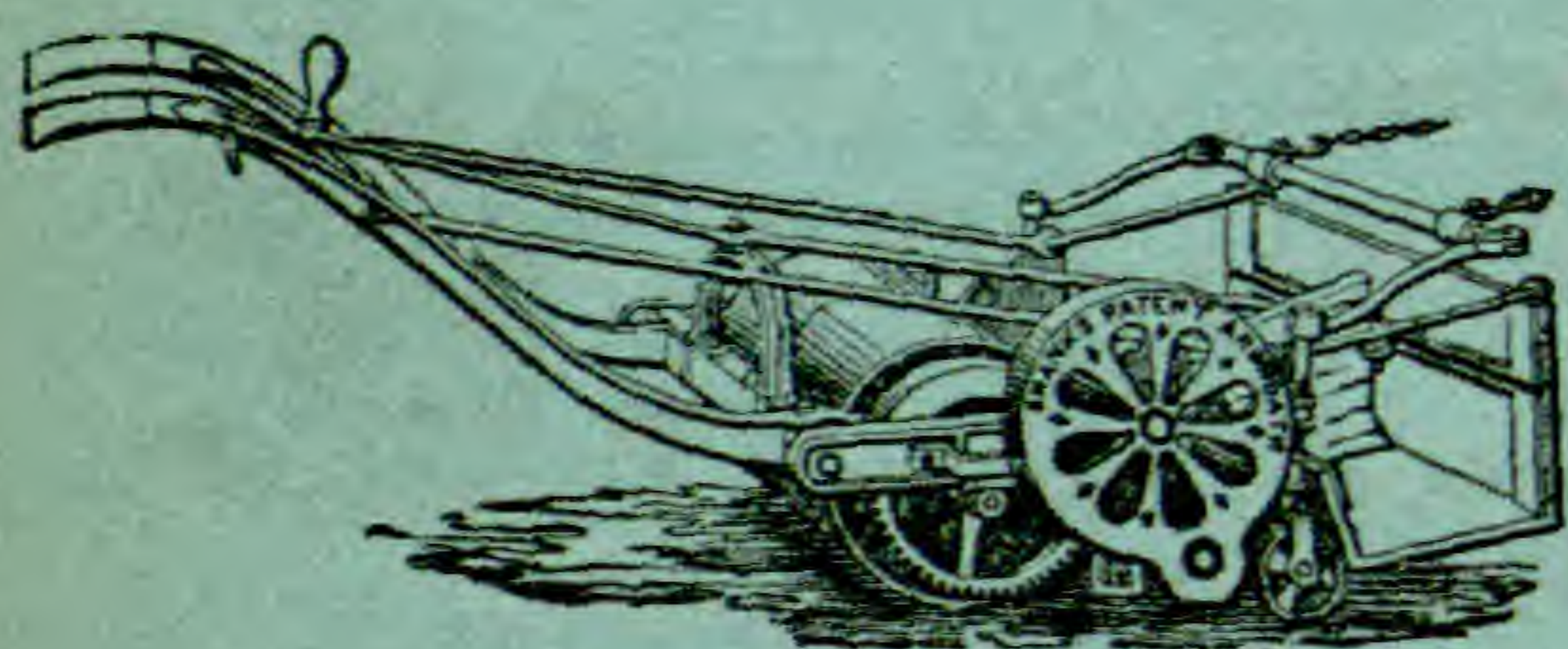
**AND ONCE BY HIS MAJESTY THE KING OF SAXONY;**

**DURING THE SEASON OF 1865 THEY WERE PATRONIZED ON FOUR OCCASIONS BY HER MAJESTY THE QUEEN;**

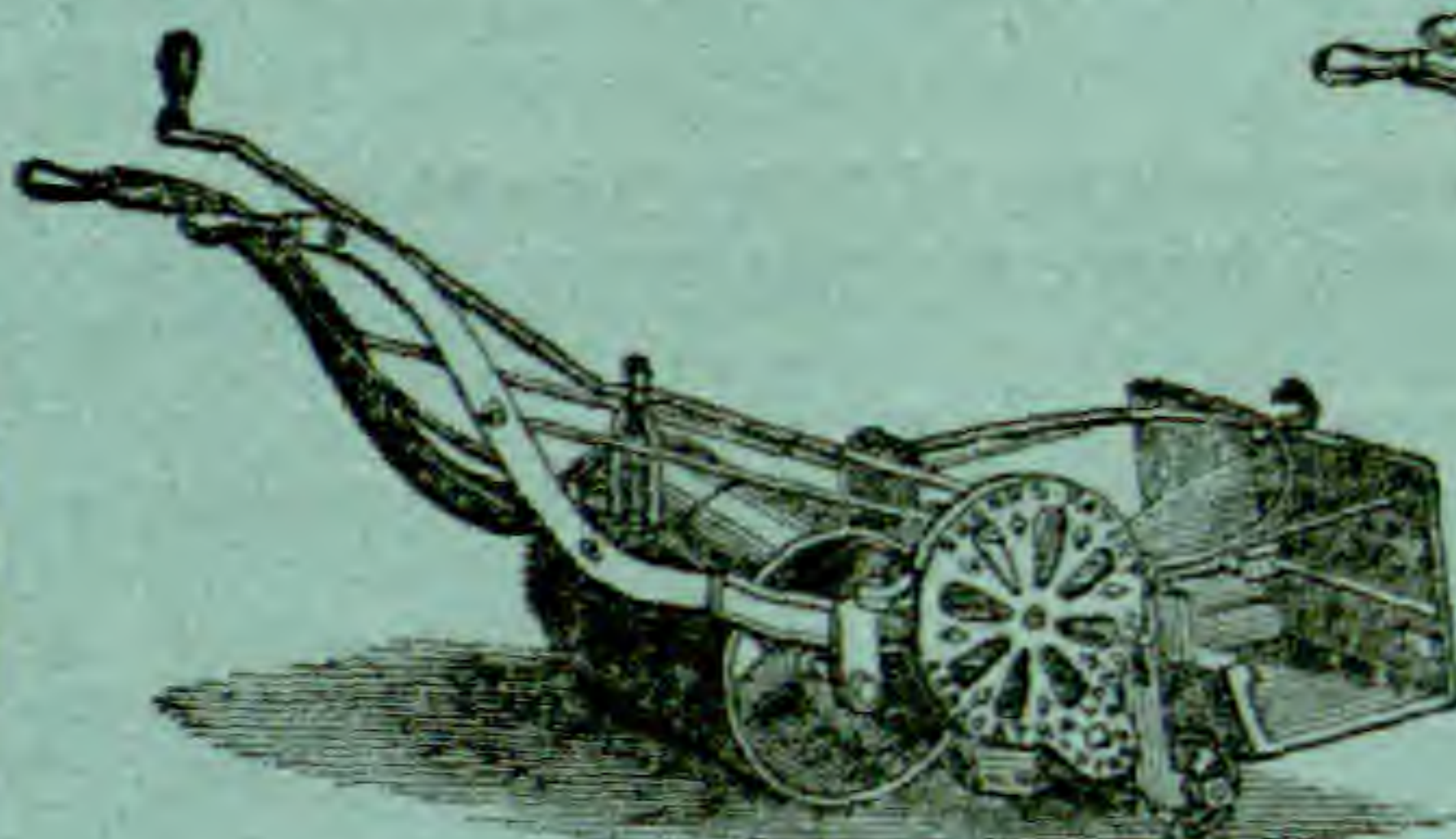
**ONCE BY HIS MAJESTY THE KING OF HOLLAND;**

**AND ONCE BY HIS MAJESTY THE KING OF PRUSSIA;**

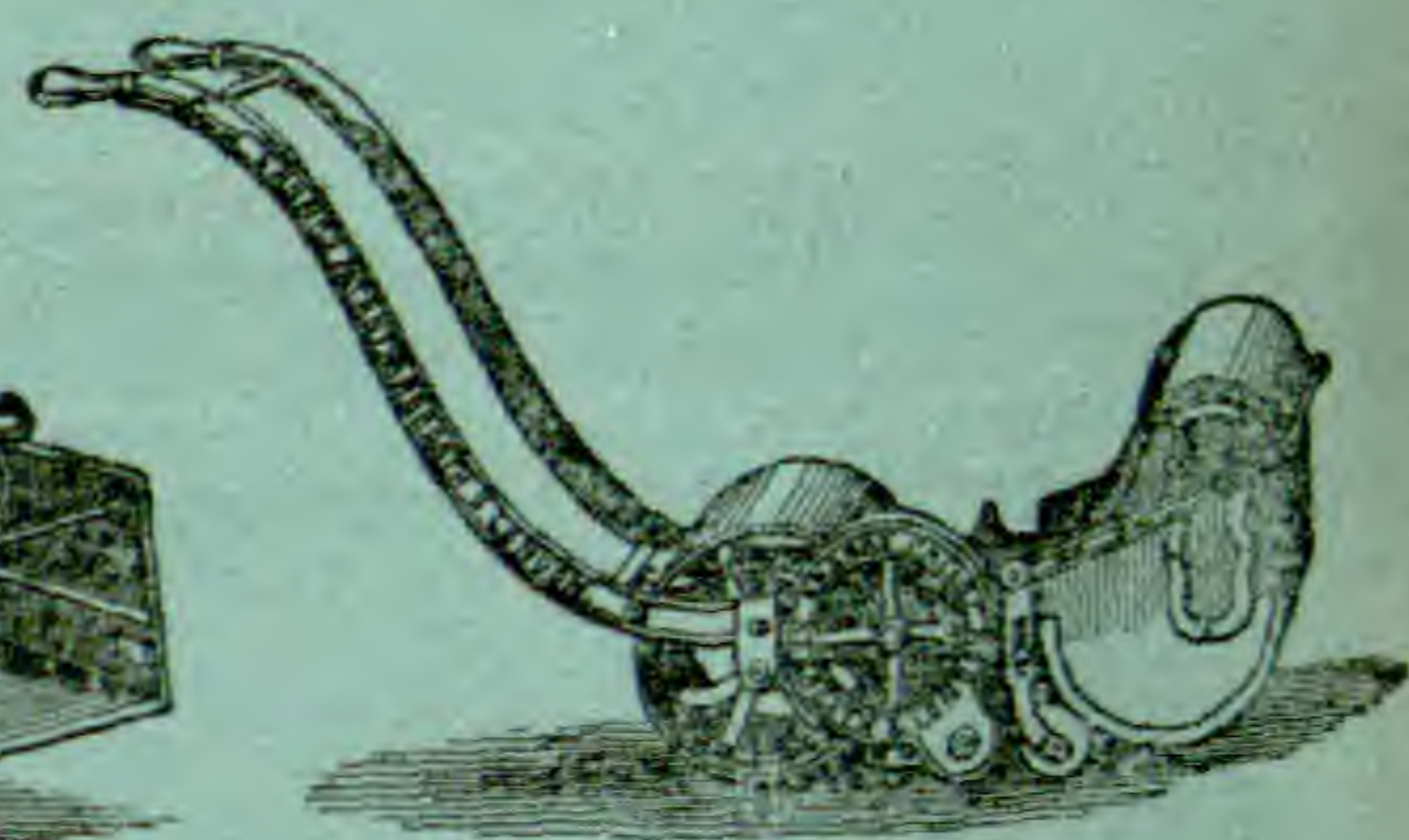
**AGAIN, DURING THE SEASON OF 1866, THEY WERE PATRONIZED ON FOUR OCCASIONS BY HER MAJESTY THE QUEEN.**



HORSE MACHINE.



PONY MACHINE.



HAND MACHINE.

ALEXANDER SHANKS & SON, in presenting their LAWN MOWERS for the Season of 1867, are gratified to be able to state that the demand for their celebrated Machines rapidly increases every year. The success which attended SHANKS' Machines during last Season is quite unparalleled in the history of the Lawn Mower.

A. S. & SON can confidently assure their numerous Friends and Customers and the Public generally that their endeavour will always be to supply a Machine, first-class in every way, one which cannot be surpassed if even equalled, whether for simplicity of construction, ease in working, or durability. None but the best materials and skilled workmen are employed in the manufacture of their Machines.

**PRICES**—Including Carriage to most of the principal Railway Stations and Shipping Ports in the Kingdom.

## SHANKS' NEW PATENT HAND MACHINE FOR 18.

10-inch Machine.....£3 10 0	} Easily worked by a Lady. Do. by a Boy. Do. by a Man.	19-inch Machine.....£7 12 6	{ Do. by a Man and a Boy. Do. by Two Men.
12-inch Machine.....4 10 0		22-inch Machine.....8 7 6	
14-inch Machine.....5 10 0		24-inch Machine.....8 17 6	
16-inch Machine.....6 10 0			

Silent Movement for the four smallest sizes, 4s. extra; for the other sizes, 7s. 6d. extra.

## SHANKS' NEW PATENT PONY & DONKEY MACHINE.

Width of Cutter.	If with Patent Delivering Apparatus.
25-inch Machine.....£12 10 0	25s. extra.
28-inch Machine.....14 10 0	30s. extra.
30-inch Machine.....15 15 0	30s. extra.
Silent Movement, 12s. 6d. extra.	

## SHANKS' NEW PATENT HORSE MACHINE.

Width of Cutter.	If with Patent Delivering Apparatus.
30-inch Machine.....£19 0 0	30s. extra.
36-inch Machine.....22 0 0	30s. extra.
42-inch Machine.....26 0 0	40s. extra.
48-inch Machine.....28 0 0	40s. extra.
Silent Movement, 20s. extra.	

SHANKS' PATENT LAWN MOWERS cut the Grass on uneven as well as on level Lawns; and it is quite immaterial whether the Grass be wet or dry.

*Every Machine warranted to give ample satisfaction, and if not approved of, can be at once returned.*

# ALEXANDER SHANKS & SON,

## 27, LEADENHALL STREET, LONDON.

## MANUFACTORY, DENS IRONWORKS, ARBROATH.

A. S. and SON keep a Stock of Lawn Mowers at 27, Leadenhall Street, London, from which Orders can be at once executed. They also have at their London Warehouse a staff of experienced Workmen thoroughly acquainted with all the details of these Machines, so that they are enabled to repair Lawn Mowers in London as well as at the Manufactory.



# BOTANICAL MAGAZINE ADVERTISER.

**EDGINGTON'S GARDEN NETTING**, the cheapest and most durable, 1*d.* per square yard, or in Quantities of 250, 500, or 1000 Yards, carriage free.

**EDGINGTON'S RICK CLOTHS** for Sixty-two Years have maintained their celebrity as the best.

**EDGINGTON'S MARQUEES** and **GARDEN TENTS** are the prettiest.

**EDGINGTON'S MARQUEES**, for hire, are the most handsome and capacious.

**HAYTHORN'S** and **WALLER'S NETTINGS**. Samples and material free on application.

Be particular—**FREDERICK EDGINGTON** and Co., Thomas Street, Old Kent Road, London, S.E.

A Liberal Discount to the Trade !

International Exhibition, 1862, Class XIX. Honourable Mention.

## **BENJAMIN EDGINGTON**

**MARQUEE, TENT, RICK-CLOTH, AND FLAG MANUFACTURER,**

BY SPECIAL APPOINTMENT TO HER MAJESTY  
AND H.R.H. THE PRINCE OF WALES.



**MARQUEES & TENTS FOR HORTICULTURAL SHOWS**  
FOR SALE OR HIRE.



*Rick Cloths, New and Second-hand, with Poles, etc., complete.*

**TANNED NETTING FOR FRUIT TREES, NEW AND REPAIRED.**

**SCRIMS FOR GREENHOUSE BLINDS, FRIGI DOMO, ETC.**

*An Illustrated Catalogue Free by Post.*

Be particular to observe the Christian Name, **BENJAMIN EDGINGTON** (only),  
2, DUKE STREET, LONDON BRIDGE, S.E. No other Establishment.

**SPLENDID NEW BLACK GRAPE, THE MUSCAT CHAMPION.**



## **JAMES VEITCH AND SONS**

WILL SEND OUT, ON AND AFTER THE FIRST OF JULY NEXT, THIS  
**MAGNIFICENT SEEDLING VARIETY,**

UNDOUBTEDLY THE FINEST YET OFFERED TO THE PUBLIC.

It was raised by Mr. Melville, of Dalmeney Park, from the Champion Hamburgh, crossed with the Cannon Hall Muscat. It is a very free setting variety, and *succeeds perfectly under the same treatment* as the Black Hamburgh. The bunches are large, well shouldered, and the berries of great size, resembling in every respect the Champion Hamburgh, but with a *most exquisite and powerful* Muscat flavour.

In the 'Gardeners' Year Book' for 1862, Dr. Hogg says:—"This is perhaps one of the greatest advances in new grapes we have yet had. It is, in fact, a Mill Hill Hamburgh with a Muscat flavour. The bunches are very large and well shouldered, the berries roundish and oblate, and the flesh firm and melting, juicy, richly flavoured, and with a fine Muscat aroma."

In the Report of the Fruit Committee of the Royal Horticultural Society for September 10, 1861, it is thus mentioned:—"The bunch in size and shape had all the appearance of one of the Mill Hill Hamburgh. It was large and well set. The berries were large, round, and oblate, shaped like small oranges, and very much 'hammered.' The flesh is firm, juicy, sweet, and richly flavoured with a marked Muscat flavour." The Committee were of opinion that it was a decided cross, a very excellent Grape, and well worthy of notice.

The Editor of the 'Gardeners' Chronicle' remarks:—"Large both in bunch and berry, possessing a fine Muscat flavour, and, in the opinion of many, one of the best grapes in the world."

The 'Scottish Horticulturist,' in quoting the above, says:—"An opinion we can cheerfully endorse. To those who think from the term Muscat that it requires an equal amount of heat to ripen it to perfection, we can assure them that it ripens as early, under exactly the same treatment, as the Black Hamburgh."

Good established Plants, on 1st July next, 21*s.* each.

Extra strong Plants, for fruiting in pots, 31*s.* 6*d.* and 42*s.* each.

ROYAL EXOTIC NURSERY, KING'S ROAD, CHELSEA, S.W.



## MR. HARDWICKE'S PUBLICATIONS.

**POPULAR SCIENCE REVIEW.** No. 24, July, 2s. 6d., contains:—Venus's Flower Basket, by Dr. J. E. GRAY, F.R.S., with illustrations—Jupiter without his Satellites, by R. A. PROCTOR, B.A., F.R.A.S., illustrated—FitzRoy's Weather Forecasts, by G. F. CHAMBERS, F.R.A.S., illustrated—Science of Life Insurance, by Dr. HARDWICKE—The New Electro-Magnetic Machines, by S. J. MACKIE, F.G.S., illustrated—Botany of a Coal-mine, by W. CARRUTHERS, F.L.S., illustrated.

**HARDWICKE'S SCIENCE GOSSIP,** No. 31, July, price 4d. An Illustrated Medium of Interchange and Correspondence for Students and Lovers of Nature. A never-failing source of ready and pleasant chat in the drawing-room or parlour. Illustrated with many cuts. The volumes for 1865 and 1866 price 5s. each.

**AT HOME IN THE WILDERNESS,** being Adventures and Experiences in Uncivilized Regions; in which it is shown where and when to encamp; how to equip and manage a train of pack-mules, break, gear, and saddle wild horses; cross streams, build log shanties, trenail a raft, dig out a canoe, or build with bark or hide, manage dog-sleighs, and tramp on snow-shoes; together with what to carry and what to leave at home, and how to get through a wild country, "where a man has to keep his eyes skinned, his knife sharp, and his powder dry, or he'll hav' his har ris'd, sure as beaver medicine." By J. KEAST LORD, late of the British North American Boundary Commission. Dedicated by permission to H.R.H. the Duke of Cambridge. At the booksellers and libraries. Crown 8vo, cloth, with portrait of author and numerous woodcuts, price 6s.

**THE BOOK OF KNOTS.** Illustrated by 172 examples, showing the manner of making every Knot, Tie, and Splice, price 2s. 6d. "To the young sailor, we should think this little *vade mecum* will prove invaluable."—*Land and Water*.

**A HANDY BOOK TO THE COLLECTION AND PREPARATION OF FRESH WATER and MARINE ALGÆ,** Diatoms, Desmids, Fungi, Lichens, Mosses, and other of the Lower Cryptogamia. With Instructions for the Formation of an Herbarium. By JOHANN NAVE. Translated and edited by the Rev. W. W. SPICER, M.A., Fellow of the Royal Microscopical Society. Fcp. 8vo, cloth, price 2s. 6d.

**THE CROWN PEERAGE FOR 1867.** Containing an Alphabetical List of the House of Lords, together with the Date of the Creation of each Title; the Birth, Accession, and Marriage of each Peer, his Heir Apparent or Presumptive; Family Name, Political Bias, and Patronage, as also a Brief Notice of the Offices which he has hitherto held, and his Country Residence and Town Address; with Complete Lists of the Scotch and Irish Peers; also the Baronetage of the United Kingdom, and the British Knighthood. Compiled by EDWARD WALFORD, M.A., late Scholar of Balliol College, Oxford, Fellow of the Genealogical and Historical Society of Great Britain, and Editor of 'The County Families of the United Kingdom.' 570 pages, price 5s. elegantly bound, gilt edges. Also, The SHILLING PEERAGE, The SHILLING BARONETAGE, The SHILLING KNIGHTAGE, and The SHILLING HOUSE OF COMMONS.

**ON DISEASES OF THE STOMACH: DYSPEPSIA.** By S. O. HABERSHON, M.D. F.R.C.P., Physician to Guy's Hospital, etc. Crown 8vo, cloth, price 5s.

CONTENTS:—Dyspepsia from—		
Weakness.	Rheumatic and Gouty.	Fermentative.
Congestion.	Renal.	Duodenal.
Inflammation.	Mechanical.	Ulcerative.
Hepatic Dyspepsia.	Sympathetic.	Cancerous.

**THE COUNTY FAMILIES OF THE UNITED KINGDOM; or, Royal Manual of the** Titled and Untitled Aristocracy of Great Britain and Ireland; containing a brief notice of the descent, birth, marriage, education, and appointments of each person, his heir apparent or presumptive; as also a record of the offices which he has hitherto held, together with his town address and country residences. By EDWARD WALFORD, M.A., late Scholar of Balliol College, Oxford. Dedicated by express permission to his Royal Highness the Prince of Wales. In one splendid volume, super-royal 8vo, price £2. 2s., 1200 pages, 11,000 families.

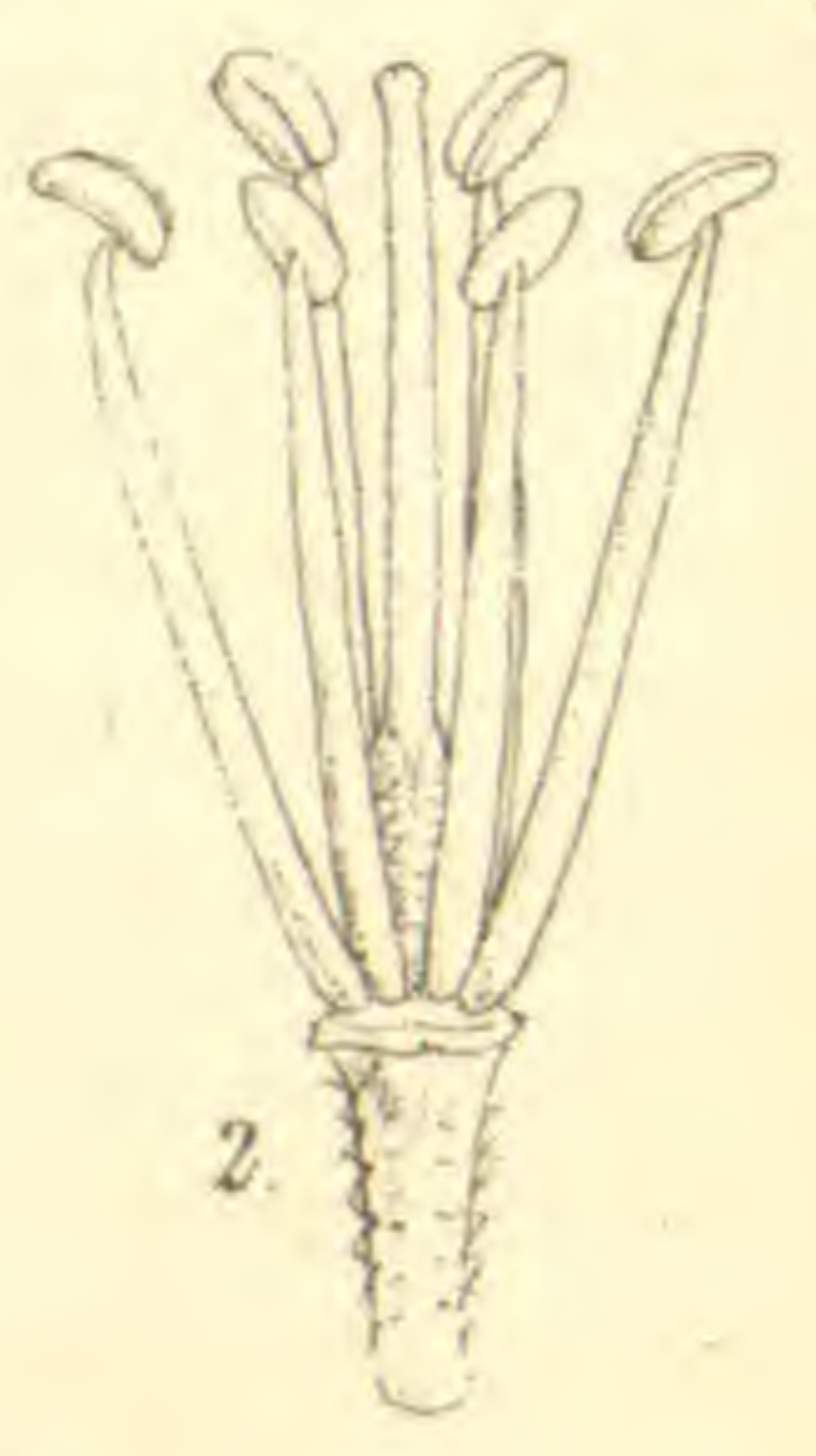
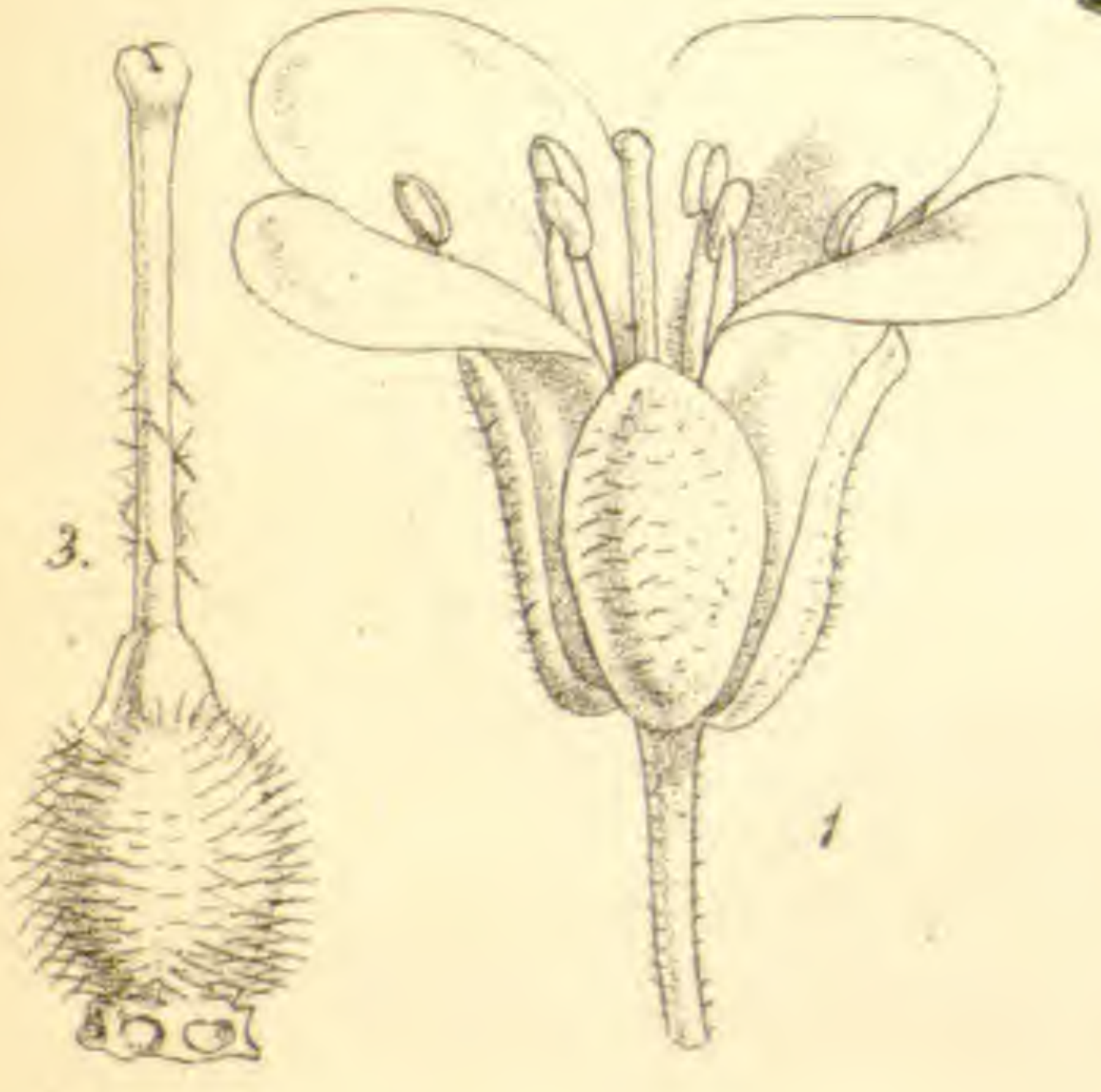
**THE GRASSES OF GREAT BRITAIN.** Containing life-sized, full-coloured Drawings with magnified Organs, of 144 British Grasses, and Observations on their Natural History and Uses. Described by CHARLES JOHNSON. Illustrated by J. E. SOWERBY. In royal 8vo. Now publishing in 10 parts, at 2s. 6d. each. "This is the most comprehensive work on British Grasses, and is the only book which gives the magnified organ to enable the reader to recognize the various grasses."

LONDON: ROBERT HARDWICKE, 192, PICCADILLY, W.



TAB. 5652 is unavoidably postponed till  
next month.







DRABA VIOLACEA.

*Violet-flowered Draba.*

Nat. Ord. CRUCIFERÆ.—TETRADIDYNAMIA, SILICULOSA.

*Gen. Char.* *Sepala* breviora, æqualia. *Stamina* simplicia. *Siliqua* elliptica oblonga v. raro linearis, compressa, polysperma, rarius oligosperma, valvis planiusculis rarissime costatis, septo membranaceo; stylus brevis v. elongatus, stigmatibus simplicibus. *Semina* 2-seriata, immarginata, funiculis setaceis; cotyledones accumbentes.—*Herbæ sæpissime parvæ, cæspitosæ, pube stellata incanæ. Folia integra, radicalia sæpe rosulata. Scapi caulesve nudi v. foliosi, foliis sessilibus. Flores ebracteati v. inferiores foliaceo-bracteati, sæpe parvi, albi v. aurei, rarius rosei v. purpurei.*

*DRABA violacea*; fruticulus suberectus, ramosus, ubique incano-tomentosus, caulibus basi nudis cicatricatis superne longe foliatis, foliis brevibus laxè imbricatis obovato-oblongis obtusis subspathulatisve integerrimis v. obtuse dentatis, floribus subcorymbosis violaceis, pedicellis inferioribus foliaceo-bracteatis elongatis, siliqua oblonga recta v. curva in stylum elongatum acicularem angustata.

*DRABA violacea.* DC. *Prod.* v. 1. p. 171. *Hook. Ic. Pl.* t. 35.

*DRABA Bonplandiana.* H. B. et K. *Nov. Gen. et Sp.* v. 5. p. 78.

It is seldom that a species of so obscure a genus as *Draba* possesses such horticultural attractions as to claim a place in the 'Botanical Magazine;' but such is the case with the present plant, which is further very interesting on account of its locality, for it attains almost as great an elevation on the lofty Andes as any Phænogamic plant. It was discovered by Humboldt and Bonpland near Quito, and has since then been gathered repeatedly by Professor Jameson, of that city, who sent seeds to his friend I. Anderson Henry, Esq., F.L.S., of Hay Lodge, Edinburgh, and from whom living plants in flower were received at Kew in March of the present year. Professor Jameson describes it as of rare occurrence, and growing in loose rocks and walls at elevations of 13–15,000 feet. It was figured by my father as long ago as 1837, in the 'Icones Plantarum,' with the remark, "This would indeed be a lovely plant to introduce into our gardens."



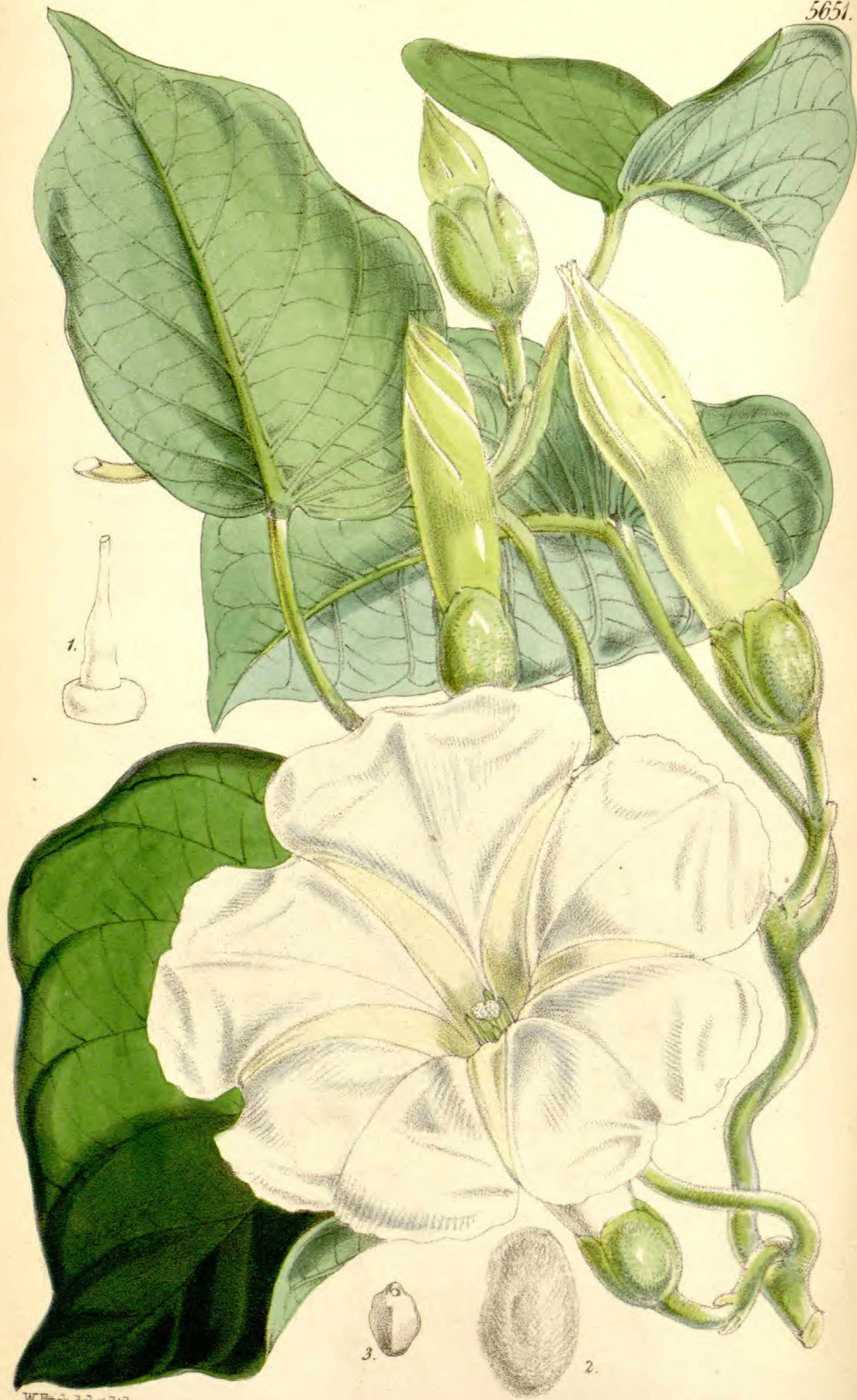
The genus *Draba*, so abundant in the mountains of Northern Europe, is even more characteristic of the Andes of tropical America, where many species, including most of the finest of the genus, are to be found.

DESCR. A densely hoary-tomentose shrubby-stemmed *herb*, a foot or so high. *Branches* naked and scarred below, clothed above with imbricating obovate or obovate-spathulate leaves. *Leaves* about half an inch long, obtuse, equally tomentose on both surfaces, obtuse, entire or obtusely toothed. *Scapes* leafy. *Flowers* subcorymbose; lower pedicels slender, arising from the axils of the uppermost leaves. *Flowers* nearly half an inch diameter. *Sepals* suberect, oblong. *Petals* obovate-spathulate. *Pod* about a third of an inch long, oblong, acute at both ends, very flat, straight or curved, narrowed into an acicular long style.—*J. D. H.*

---

Fig. 1. Flower. 2. Stamens. 3. Ovary, style, and stigma:—*all magnified.*







TAB. 5651.

IPOMŒA GERRARDI.

*Gerrard's Ipomœa.*

Nat. Ord. CONVULVULACEÆ.—PENTANDRIA MONOGYNIA.

*Gen. Char. (Vide supra, TAB. 5330.)*

IPOMŒA *Gerrardi*; caule lævi volubili, petiolis pedunculis sepalis foliisque subtus ad nervos laxè albo-lanatis v. araneosis, foliis rotundato-cordatis obtusis acuminatisve obscure sinuatis integerrimis supra glabris, pedunculis axillaribus solitariis 1-floris 2-bracteolatis, bracteolis brevibus obtusis persistentibus, sepalis mediocribus oblongis obtusis concavis, floribus amplis albis suaveolentibus, seminibus dense et copiose fuscolanatis.

Of this very fine plant the seeds have several times been sent to Kew from Natal, where it seems to be known as "wild cotton;" the first were received in 1857, from our excellent correspondent Dr. Sutherland, Surveyor-General of the colony; and from a plant reared from these the drawing here published was made. It forms a tuberous stock above the earth as large as the fist, from which annual stems shoot, attain a length of ten to fifteen feet, and flower copiously. It succeeds well in the moderate heat of the Palm stove, flowering about August. The seeds were exhibited as "wild cotton" in the Great Exhibition of 1862, and attracted some attention as a possible substitute for cotton, the cotton famine at that time raging.

As a species, *I. Gerrardi* is closely allied to *I. albivenia*, Don, of Zanzibar (*Convolvulus albivenius*, Lindl. Bot. Reg. t. 1116), but that plant is more woolly, the stems are tubercled, the bracts are long and linear, and the inside of the (much smaller) corolla tube is purple. I have named it after a most indefatigable collector, Mr. Gerrard, of Natal, who sent dried specimens to Sir W. Hooker, and who, after exploring the countries to the northward of Natal, proceeded with impaired health as a naturalist to Madagascar, where he soon succumbed to that pestilential climate.

JULY 1st, 1867.



DESC. *Stems* numerous, from a stout woody root-stock, ten to fifteen feet long, twining, not tubercled, cobwebby or covered with thin white wool, as are the petioles, nerves of the leaves below, peduncles, and sepals. *Leaves* on terete petioles two to four inches long, rounded-cordate, four to five inches long, obtusely or acutely acuminate, obscurely sinuate. *Peduncles* axillary, solitary, one-flowered, shorter than the petioles, stout, terete. *Bracts* very small, short, ovate, obtuse, persistent. *Sepals* two-thirds of an inch long, concave, obtuse. *Seeds* densely four inches in diameter, very sweet-scented. *Corolla* white, clothed with brown wool.—*J. D. H.*

---

Fig. 1. Disk and pistil. 2. Seed with its woolly covering. 3. The same removed:—*all but Fig. 1 of the nat. size.*





W. Fitch, del. et lith.

Vincent Brooks, Imp.



TAB. 5652.

DENDROBIUM BULLERIANUM.

*Mr. Wentworth Buller's Dendrobium.*

Nat. Ord. ORCHIDÆ.—GYNANDRIA MONANDRIA.

*Gen. Char. (Vide supra, TAB. 4755.)*

DENDROBIUM *Bullerianum*; caulibus suberectis striatis foliosis (floriferis aphyllis), foliis ovato-lanceolatis acutis, floribus geminatis vel ternatis, bracteis ovatis acutis pedicellis 5-plo brevioribus, sepalis petalisque (paulò latioribus) lanceolatis acutis, labello integro latè ovato acuto maculâ magnâ circulari aureâ supra discum. *Bateman.*

DENDROBIUM gratiosissimum. *Hort.*

A few plants of this pretty Dendrobium were imported two or three years ago from Moulmeine by the Messrs. Hugh Low and Co. of Clapton, to whom they had been sent—like so many other additions to this beautiful genus—by their indefatigable correspondent, Mr. Parish. In structure it is perhaps most nearly allied to *D. crepidatum*, from whence the form of the lip abundantly distinguishes it; while in the size and colouring, and general effect of its flowers, it somewhat resembles the otherwise very different *D. Devonianum*.

Mr. Wentworth Buller, one of our most zealous Orchidologists, having been the first to flower this plant in his very rich collection at Strete Raleigh, Devon, I have great pleasure in naming the plant in his honor. He describes it as of very easy cultivation in the Dendrobium house, where it flowers in the spring.

DESCR. *Stems* nearly erect, slender at the base, and rising to upwards of a foot in height, striated, leafless when flowering. *Leaves* ovate-lanceolate, two or three inches long, sharp-pointed, falling off before the flowers appear. *Bracts* ovate, acute, five times longer than the pedicels. *Flowers* in twos and threes, of a creamy white, faintly tipped with rose. *Sepals*

AUGUST 1st, 1867.



oblong-lanceolate; *petals* wider than the sepals, ovate-lanceolate, acute. *Lip* broadly ovate, acute, its edges entire, and its disc decorated with a large, rich, circular yellow spot, which is streaked with reddish-orange lines.—*J. B.*

---

Fig. 1. Column and base of lip. 2. Lip spread out:—*slightly magnified.*





W. Fitch, del. et lith.

Vincent Brooks, Imp.



RUDGEA MACROPHYLLA.

*Large-leaved Rudgea.*

Nat. Ord. RUBIACEÆ.—PENTANDRIA MONOGYNIA.

*Gen. Char.* Calycis tubus subglobosus; lobi 5, acuti. Corolla subinfundibuliformis; tubus gracilis, fauce nuda; lobi 5, erecto-patentes v. reflexi, subconcavi, apice 3-quetto incurvo v. deflexo. Stamina 5, corollæ fauce inserta, inclusa, filamentis brevibus v. elongatis; antheræ oblongæ, erectæ. Ovarium 2-loculare; stylus simplex, stigmatibus 2-cruri; ovula in loculis solitaria. Bacca 2-locularis, 2-sperma.—Arbores et frutices Americæ tropicæ, glabri v. cinereo-pubescentes. Folia breviter v. longe petiolata. Stipulæ magnæ, liberæ v. connatæ, sæpe fimbriatæ v. setosæ. Flores in paniculas v. capitula terminales v. pseudo-terminales dispositi, albi.

RUDGEA macrophylla; frutex glaberrimus, ramulis robustis, foliis 1-2-pedalibus brevissime petiolatis elongato-obovato-oblongis v. lanceolatis subacutis inferne angustatis basi acutis obtusis v. cordato-2-lobis, floribus magnis in capitulum magnum densiflorum globosum crasse pedunculatum dispositis, stipulis in tubum connatis dorso infra margines setosis.

RUDGEA macrophylla. Benth. in Linn. v. 23. p. 456. Walp. Ann. v. 2. p. 747.

A magnificent plant, and belonging to a genus which, though containing many species, had never previously, so far as I am aware, been introduced into European gardens. All of the species are South American, and the present, which flowered in Mr. Henderson's Nursery, of Pine-apple Place, in March of the present year, is a native of the neighbourhood of Rio de Janeiro, where it has been found by various collectors, and is described (by Gardner) as a shrub six feet high.

DESCR. A glabrous, shining, deep-green *shrub*, about six feet high. Branches terete, very stout. Leaves very large, one to two feet and upwards long, very shortly petioled, narrow obovate-oblong or obovate-lanceolate, acuminate, spreading and recurved, narrowed to the base, which is acute obtuse or auriculate-two-lobed, very coriaceous, shining, with a stout broad midrib and numerous veins. Stipules

JULY 1ST, 1867.

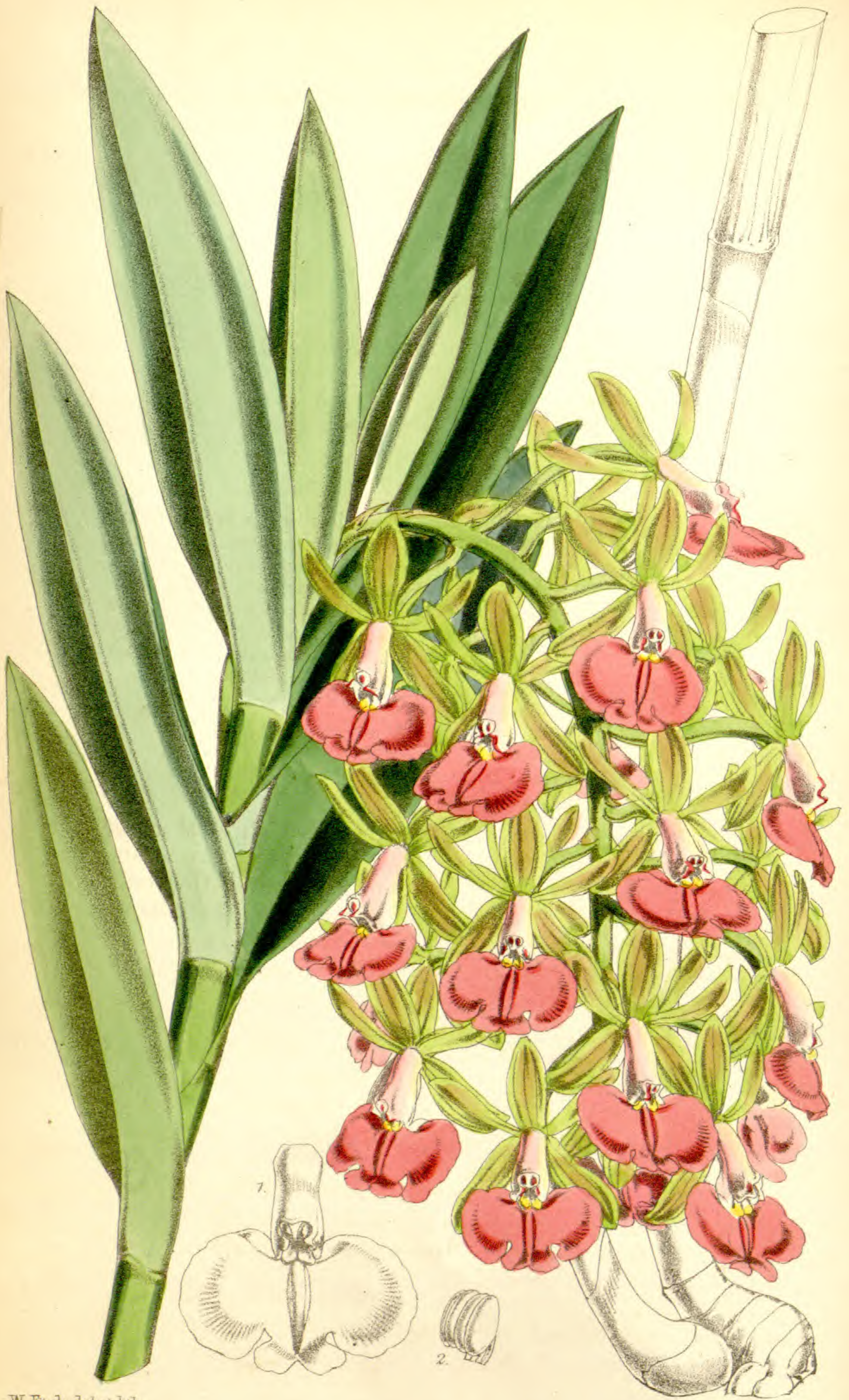


connate into a cylindric short sheath, with two rows of thick, erect setiform processes on their sides. *Flowers* cream-white, collected into a globose dense head as large as a small fist. *Peduncle* very stout, cylindric; each flower one to one and a half inches long. *Ovary* globose, pubescent. *Calyx teeth* small, acute. *Corolla* thick in texture, funnel-shaped; lobes very thick, tips scarcely inflexed. *Filaments* long; *anthers* included. *Style* slender; *stigmas* linear.—J.D.H.

---

Fig. 1. Stipules, stem and base of leaf. 2. Flowers, *both of nat. size*. 3. Stamen. 4. Pistil and calyx. 5. Transverse section of ovary. 6. Ovule:—*all magnified*.







TAB. 5654.

EPIDENDRUM COOPERIANUM.

*Mr. Cooper's Epidendrum.*

Nat. Ord. ORCHIDÆ.—GYNANDRIA MONANDRIA.

*Gen. Char. (Vide supra, TAB. 5336.)*

EPIDENDRUM (§ Spathium) *Cooperianum*; caulibus rigidis erectis versus apicem foliosis, foliis distichis lanceolatis acutis pedunculo denso nutante multifloro e spathâ herbaceâ carinatâ subduplici orto vix æquantibus, bracteis minutis setaceis, floribus carnosiss, sepalis ovali-lanceolatis acutis, petalis minoribus lineari-lanceolatis acutis, labello amplo basi bicalloso trilobo, laciniis lateralibus, maximis subrotundocuneatis, intermediâ transversâ reniformi alte emarginatâ, lineâ elevatâ per discum currente; clinandrio obtuse dentato.—*Bateman.*

EPIDENDRUM Cooperianum. *Batem., mss.*

Cultivators scarcely need to be told that the vast genus *Epidendrum* is divided, as respects *habit*, into two grand divisions, *i.e.* the species that have and the species that have not pseudobulbs. They are also well aware that it is among the latter that the most describable kinds are generally to be found. There are, however, a few exceptions, amongst which must be numbered the plant now represented, which has a neat, compact, caulescent habit, and will well repay cultivation. It is named in compliment to Mr. Cooper, of Alpha House, Old Kent Road, a very zealous collector and successful grower of Orchids, who had the merit of exhibiting it for the first time at one of the Tuesday meetings of the Horticultural Society in the spring of last year. A month or two later, it was exhibited at another of these meetings by Mr. Dawson, of Meadow Bank, near Glasgow.

It is a Brazilian plant—probably from the neighbourhood of Rio—and grows readily in the *Cattleya* house, but it should also be tried in the Mexican house, in which very many Brazilian Orchids—especially divers *Oncidia*—would, I conceive, succeed perfectly. The *Cattleya* house itself

JULY 1st, 1867.



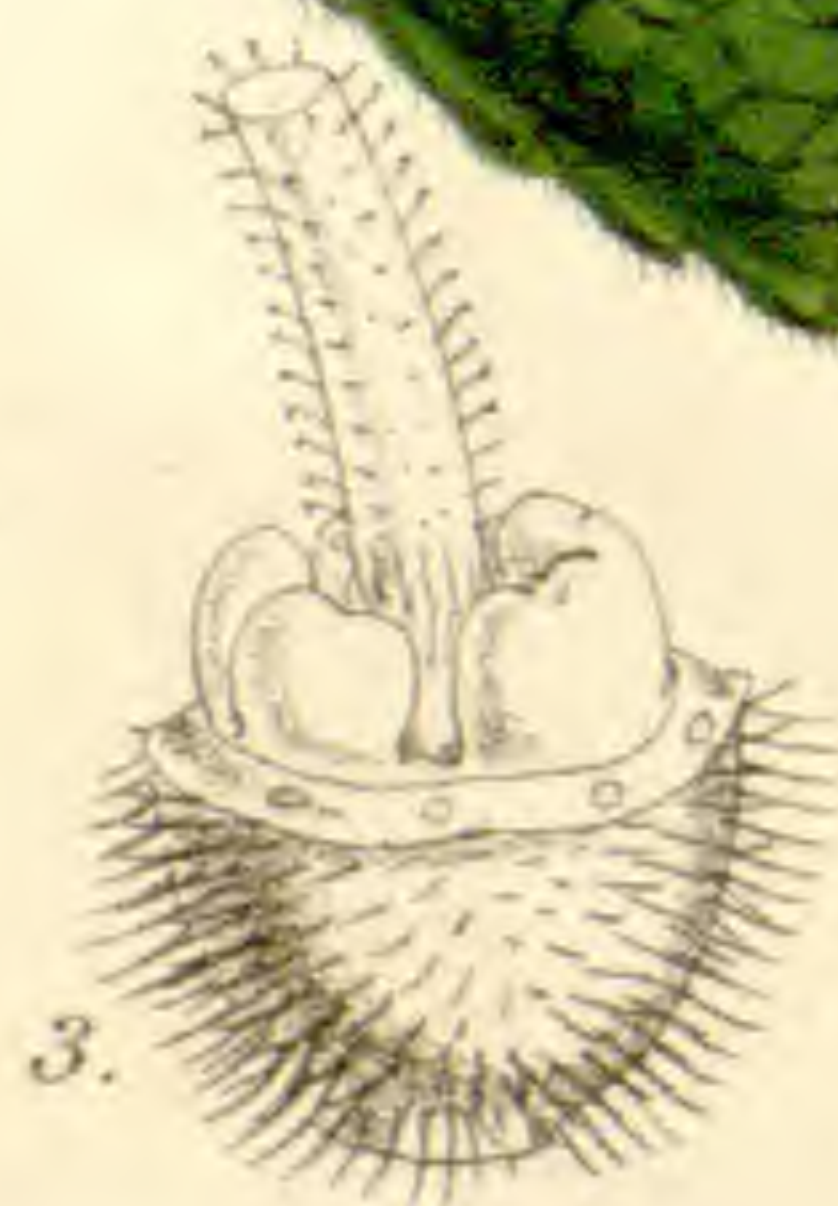
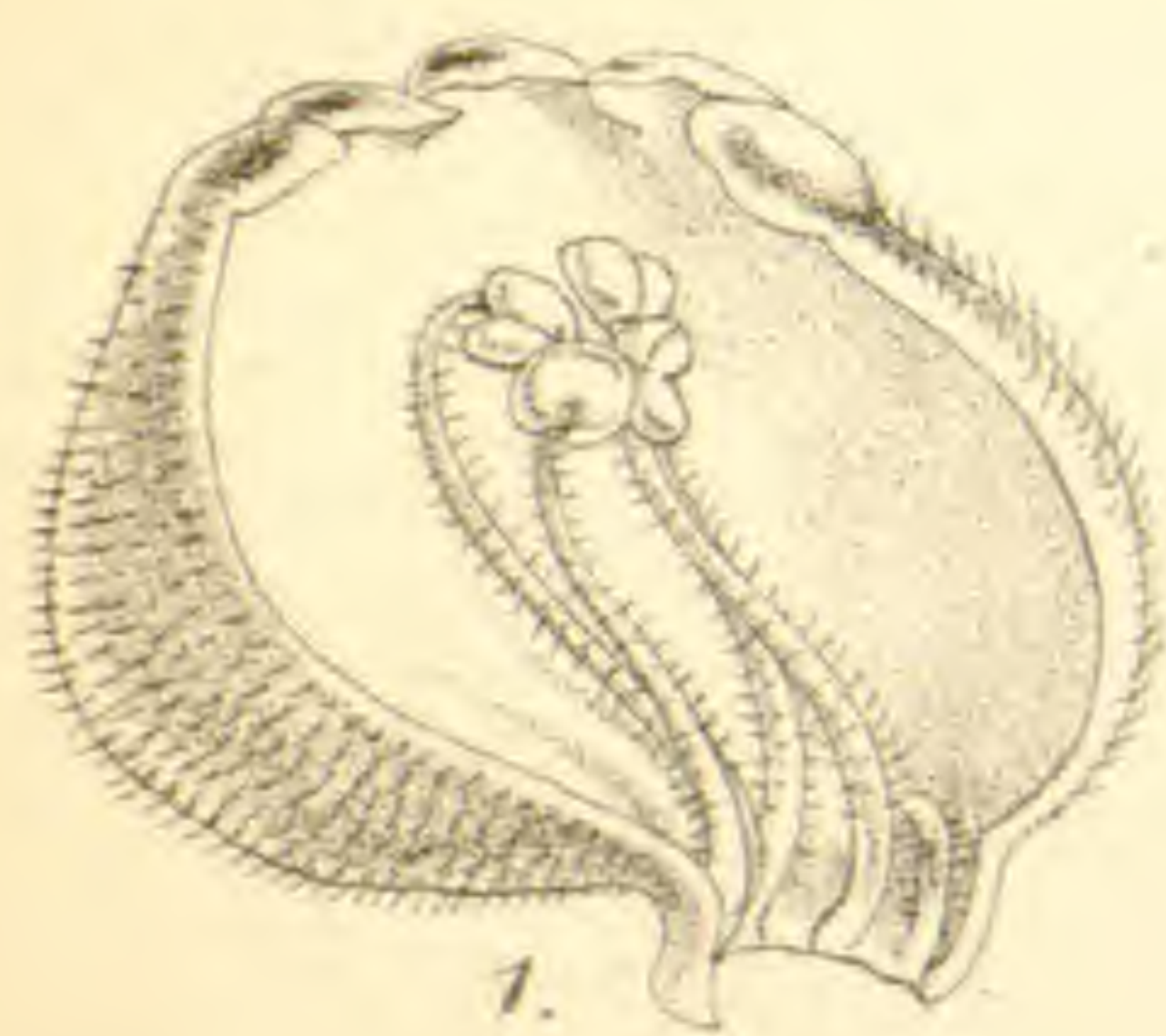
frequently proves too warm and too moist for many of the Orchids from the higher portions of the Organ Mountains, whence not a few of the most popular species have come to us.

DESCR. A caulescent plant with erect rigid *stems*, two feet or more high, thickly clothed in their upper portion with stiff distichous lanceolate sharp-pointed *leaves*, which are not quite so long as the dense nodding *peduncle*, which issues from what is usually a twofold keeled herbaceous *spathe*, the latter not quite so long as the leaves. *Raceme* many-flowered. *Flowers* coriaceous, of a dull yellowish-brown, with the exception of the lip, which is bright rose. *Sepals* oval-lanceolate, acute. *Petals* narrower than the sepals, linear-lanceolate, acute. *Lip* large, fully as broad as the column is long, divided into three unequal portions, of which those at the side are plane, subrotund, and rather wedge-shaped, while the central one is much smaller, kidney-shaped, and deeply emarginate; the disk of the lip is traversed by a raised line, and has at its base two oblong calli. *Column* somewhat bluntly toothed.—*J. B.*

---

Fig. 1. Column and lip, seen in front. 2. Pollen-masses :—*magnified*.







GLOXINIA HYPOCYRTIFLORA.

*Hypocyrta-flowered Gloxinia.*

Nat. Ord. GESNERIACEÆ.—DIDYNAMIA ANGIOSPERMIA.

*Gen. Char.* Calycis tubus basi ovario connatus, 5-fidus v. 5-partitus. Corolla polymorpha, tubo cylindrico v. inflato, limbi lobis patentibus v. conniventibus. Stamina basi corollæ inserta, didynama. Discus e glandulis 5 liberis v. annulus crenatus. Ovarium basi v. altius calycis tubo adhærens. Stylus crassiusculus, stigmatē 2-lobo. Fructus capsularis.—Herbæ radicibus fibrosis, propagulis repentibus. Flores axillares.

GLOXINIA *hypocyrtaflora*; herbacea, erecta, tota patentim subhirsuta, radice fibrosa, propagulis aucta, foliis oppositis breviter petiolatis ovato-rotundatis obtusis basi cordatis, sinu angusto, convexis obtuse serratis reticulatim venosis, areolis bullato-regulosis, costa nervisque pallidis, pedunculis axillaribus solitariis 2-nisve adscendentibus validis 1-floris, calycis parvi tubo ovario connato, limbo ultra ovarium producto subcampanulato breviter 5-fido, corolla ventricosa gibba fere globosa patentim hirsuta, lobis 5 parvis conniventibus faucem claudentibus, filamentis styloque villosis, antherarum loculis pubescentibus disci glandulis 5 erectis, ovarii apice libero.

The *Gesneriaceæ* are confessedly a very difficult tribe to classify, and the subject of the present Plate tends to increase the difficulty. In its habit, fibrous roots, and the presence of propagula (shoots bearing leafy buds), it is a *Gloxinia*; in the corolla, a *Hypocyrta*; in the glands, a *Gesnera*; whilst in the small calyx it differs from the ordinary forms of all these genera. Many botanists would no doubt found a new genus on it; but this I am unwilling to do for a member of an Order whose genera are already so badly defined. It must also be observed, that though it differs in the form of the corolla so much from any known *Gloxinia*, this organ presents extremely different forms in the various species both of that genus and of *Gesnera*.

*Gloxinia hypocyrtaflora* is a native of the forests of the Quitenian Andes, whence there are dried specimens (with propagula) in the Hookerian Herbarium, collected by Pro-



fessor Jameson. For the specimen here figured I am indebted to Messrs. Veitch, who introduced it by means of their excellent collector, Mr. Pearce. It is a very beautiful plant, especially in the rich green of its velvety leaves traversed by pale veins.

DESCR. A very hirsute and subglandular herb, a foot or so high. *Roots* fibrous. *Stem* erect, terete, soft. *Leaves* opposite, three to four inches long, on petioles half to three-quarters of an inch long, broadly ovate-cordate, with a very narrow sinus at the base, convex, obtuse, obtusely serrate, costa and nerves yellow, contrasting strongly with the dark emerald-green closely-reticulated surface of the leaf; the areolæ between the nerves present elevated conical papillæ. *Peduncles* one to two, in the axils of the leaves, ascending, and when numerous on the plant, forming a sort of corymb, stout, curved, three to four inches long. *Calyx* very short, broadly campanulate; limb produced beyond the ovary, shortly and obtusely five-lobed. *Corolla* two-thirds of an inch long, bright orange-red, nearly globose, but gibbous below, with five very obscure lobes which close over the mouth, bright orange-red, yellower on the gibbous portion. *Glands* epigynous, five, thick. *Stamens* four, filaments hirsute; *anthers* cohering, pubescent; fifth stamen rudimentary. *Ovary* sunk in the calyx tube, apex free, hairy. *Style* stout, pubescent. *Stigma* two-lobed.—*J. D. H.*

---

Fig. 1. Corolla laid open. 2. Calyx and ovary. 3. Glands, and base of calyx. 4. Glands removed:—*all magnified.*



*Now ready, Crown 8vo, 16 Coloured Plates and 100 Wood Engravings,  
price 10s. 6d.*

## BRITISH GRASSES:

AN INTRODUCTION TO THE STUDY OF THE GRAMINEÆ OF  
GREAT BRITAIN AND IRELAND.

WITH INTRODUCTORY CHAPTERS ON THE STRUCTURE, USES, ETC.

By M. PLUES.

---

*Just published, Crown 8vo, 12 Coloured Plates, 8s. 6d.*

THE

## EDIBLE MOLLUSKS OF GREAT BRITAIN AND IRELAND,

WITH RECIPES FOR COOKING THEM.

By M. S. LOVELL.

---

*Just published, Crown 8vo, with Wood-engravings, price 7s. 6d.*

## SUNSHINE AND SHOWERS:

THEIR INFLUENCES THROUGHOUT CREATION.

A POPULAR COMPENDIUM OF METEOROLOGY, CURIOSITIES OF THE WEATHER,  
AND WEATHER WISDOM.

By ANDREW STEINMETZ, Esq.,

OF THE MIDDLE TEMPLE, BARRISTER-AT-LAW,

AUTHOR OF 'A MANUAL OF WEATHER-CASTS,' ETC. ETC.

This Work not only treats fully all the leading topics of METEOROLOGY, but especially of the use of the HYGROMETER, for which systematic RULES are now for the first time drawn up. Among other interesting and useful subjects, are chapters on RAINFALL in England and Europe in general—WET AND DRY YEARS—*Temperature and Moisture with respect to the health of Plants and Animals*—The Wonders of Evaporation—Soil Temperature—The Influence of Trees on Climate and Water Supply—THE PROGNOSTICATION OF THE SEASONS AND HARVEST—The Characteristics and Meteorology of the Seasons—Rules of the Barometer—Rules of the *Thermometer* as a *Weather Glass*—POPULAR WEATHER-CASTS—ANEMOMETRY—and finally, *What becomes of the Sunshine*—and *What becomes of the Showers*.

"The author has explained the subjects with a fulness never before attempted, and has introduced a variety of practical suggestions which will be useful to all classes of readers. . . . The book is written with much cleverness, and is calculated to amuse as well as instruct."—*Observer*.

---

*Just published, Crown 8vo, 9s.*

## THE REASONING POWER IN ANIMALS.

By THE REV. J. S. WATSON.

"Full of entertainment, of instruction, and of matter suggestive of thought on that strange world of utterly mysterious life with which we come into daily contact, but of the essence of which we know scarcely anything."—*Daily News*.

---

*Just published, Crown 8vo, with Woodcuts and Lithographic Frontispiece, 6s.*

## METEORS, AEROLITES, AND FALLING STARS.

By DR. T. L. PHIPSON.

"Dr. Phipson has earned the thanks of the public by his clear and pains-taking statement of what these facts encourage us to accept as truths of physics."—*Saturday Review*.

---

REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.



# WORKS ON BOTANY.

**BENTHAM'S ILLUSTRATED BRITISH FLORA**; a Description (with a Wood-Engraving, including dissections, of each species) of the Flowering Plants and Ferns indigenous to, or naturalized in, the British Isles. 2 vols. 8vo. 1295 Wood-Engravings, from Original Drawings by W. FITCH. £3. 10s.

**BENTHAM'S HANDBOOK of the BRITISH FLORA**; a Description of the Flowering Plants and Ferns indigenous to, or naturalized in, the British Isles. For the Use of Beginners and Amateurs. 12s.

**MOORE'S FIELD BOTANIST'S COMPANION**; a Familiar Account, in the Four Seasons, of the most common of the Wild Flowering Plants of the British Isles. 24 Coloured Plates, by W. FITCH. 21s.

**BENTHAM'S OUTLINES of ELEMENTARY BOTANY**, as Introductory to Local Floras. 2s. 6d.

**HOOKE'S FLORA of NEW ZEALAND**; a Systematic Description of the Native Plants of New Zealand, and the Chatham, Kermadec's, Lord Auckland's, Campbell's, and Macquarrie's Islands. Part I., 16s. Part II., 14s., or complete in one vol., 30s. Published under the auspices of the Government of that colony.

**BENTHAM'S FLORA AUSTRALIENSIS**; A Description of the Plants of the Australian Territory. Vols. I. to III., 20s. each. Published under the auspices of the several Governments of Australia.

**GRISEBACH'S FLORA of the BRITISH WEST INDIAN ISLANDS**. 37s. 6d. Published under the auspices of the Secretary of State for the Colonies.

**BENTHAM'S FLORA HONGKONGENSIS**; a Description of the Flowering Plants and Ferns of the Island of Hongkong. With a Map of the Island. 16s. Published under the authority of Her Majesty's Secretary of State for the Colonies.

**HOOKE'S FLORA of TASMANIA**; Royal 4to, 2 vols. 200 Coloured Plates. £17. 10s. Published under the authority of the Lords Commissioners of the Admiralty.

**HOOKE on the FLORA of AUSTRALIA**, its Origin, Affinities, and Distribution. 10s.

**HOOKE'S RHODODENDRONS of SIKKIM-HIMALAYA**; being an account, Botanical and Geographical, of the Rhododendrons recently discovered in the Mountains of Eastern Himalaya, from Drawings and Descriptions made on the spot, by Dr. J. D. HOOKE, F.R.S. Folio, 30 Coloured Plates. £3. 16s.

**MOGGRIDGE'S FLORA of MENTONE**. Royal 8vo. Parts I. and II., each, 25 Coloured Plates, 15s.

**WOODS'S TOURIST'S FLORA**; Descriptive Catalogue of the Flowering Plants and Ferns of the British Islands, France, Germany, Switzerland, Italy, and the Italian Islands. 18s.

**HOOKE'S BRITISH FERNS**; Figures and Descriptions, with Analyses of the Fructification and Venation, of the Ferns of Great Britain and Ireland, systematically arranged. Royal 8vo, 66 Coloured Plates, £2. 2s.

**HOOKE'S GARDEN FERNS**; Figures and Descriptions, with Analyses of the Fructification and Venation, of a Selection of Exotic Ferns, adapted for Cultivation in the Garden, Hothouse, and Conservatory. Royal 8vo, 64 Coloured Plates, £2. 2s.

**HOOKE'S FILICES EXOTICÆ**; Figures and Descriptions of Exotic Ferns, chiefly of such as are cultivated in the Royal Gardens of Kew. Royal 4to, 100 Coloured Plates, £6. 11s.

**CHANTER'S FERNY COMBES**; a Ramble after Ferns in the Glens and Valleys of Devonshire. Second Edition. 8 Coloured Plates and a Map of the County, 5s.

**BERKELEY'S BRITISH MOSSES**, containing all that are known to be Natives of the British Isles. 24 Coloured Plates, 21s.

**BERKELEY'S BRITISH FUNGOLOGY**, containing Characters of above a Thousand Species of Fungi, and a Complete List of all that have been described as Natives of the British Isles. 24 Coloured Plates, 30s.

**BADHAM'S ESCULENT FUNGUSES of ENGLAND**, containing an Account of their Classical History, Uses, Characters, Development, Structure, Nutritious Properties, Modes of Cooking and Preserving, etc. New Edition. Edited by F. CUBREY, F.R.S. 12 Coloured Plates, 12s.

**HUSSEY'S BRITISH MYCOLOGY**, comprising Figures and Descriptions of the Funguses of interest and novelty indigenous to Britain. Royal 4to. First Series, 90 Coloured Plates, £7. 12s. 6d.; Second Series, 50 Coloured Plates, £4. 10s.

**HARVEY'S PHYCOLOGIA BRITANNICA**; or, History of British Seaweeds, containing Coloured Figures, Generic and Specific Characters, Synonyms, and Descriptions of all the Species of Algæ inhabiting the Shores of the British Islands. Royal 8vo, 4 vols., 360 Coloured Plates, £6. 6s.

**HARVEY'S SYNOPSIS of BRITISH SEA-weeds**. 5s.

**HARVEY'S PHYCOLOGIA AUSTRALICA**, a History of Australian Seaweeds, comprising Coloured Figures and Descriptions of the more characteristic Marine Algæ of the South Hemisphere. Royal 8vo, 5 vols., 300 Coloured Plates, £7. 13s.

**HARVEY'S NEREIS AUSTRALIS**; or, Algæ of the Southern Ocean. Imperial 8vo, 50 Coloured Plates, £2. 2s.



# GREEN'S PATENT SILENS MESSOR,

OR

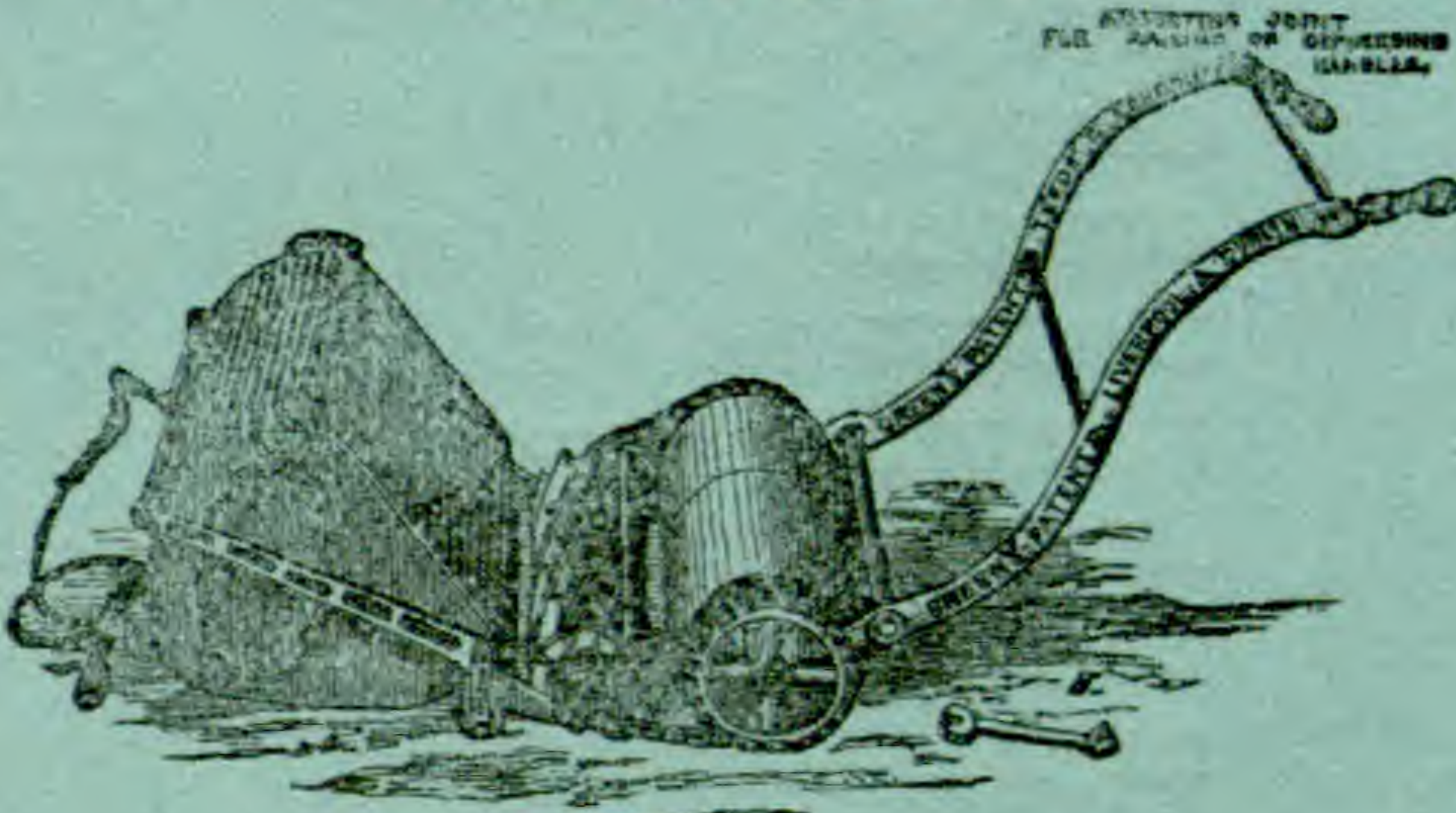
NOISELESS LAWN MOWING, ROLLING AND COLLECTING MACHINES.  
FITTED WITH PATENT SELF-SHARPENING CYLINDER CUTTERS.

By Special Appointment  
Sole Manufacturer



To Her Most Gracious  
Majesty the Queen.

Every Machine is warranted to give entire satisfaction, and if not approved of can be returned unconditionally.



Green's Patent Lawn Mowers have proved to be the best, and have carried off every prize that has been given in all cases of competition.

### PRICES OF HAND MACHINES.

To cut 10 inches ...	£3 10 0	Suitable for a Lady	To cut 18 inches ...	£7 10 0	Suitable for one person
" 12 "	4 10 0	"	" 20 "	8 0 0	Suitable for two persons
" 14 "	5 10 0	Suitable for one person	" 22 "	8 10 0	"
" 16 "	6 10 0	"	" 24 "	9 0 0	"

Prices of Horse, Pony, and Donkey Machines, including patent self-delivery box; cross stay complete; suitable or attaching to ordinary chaise-traces or gig harness.

To cut 26 inches ...	£13 0 0	Leather Boots for Donkey, 18s.	To cut 30 inches ...	£21 0 0	Leather Boots for Pony, 22s.
" 28 "	15 0 0		" 36 "	24 0 0	
" 30 "	17 0 0		" 42 "	27 0 0	
			" 48 "	30 0 0	Horse, 26s.

The 26, 28, and 30 inches can easily be worked by a donkey, or by two men, on an even lawn, the 30 and 36 inches by a pony, and 42 and 48 inches by a carriage horse; and, as the Machines make no noise in working, the most spirited animal can be employed without fear of its running away, or in any way damaging the Machine.

Both the Horse, Pony, Donkey, and Hand Machines possess (over all other Makers) the advantages of self-sharpening: the cutters being steel on each side, when they become dull or blunt by running one way round the cylinder, can be reversed again and again, bringing the opposite edge of the cutter against the bottom blade, when the Machine will cut equal to new. Arrangements are made that the cylinder can be reversed, by any unexperienced person, in two or three minutes.

The above Machines are made from the best materials, and of superior workmanship; are delivered Carriage Free to all the principal Railway Stations and Shipping Ports in England.

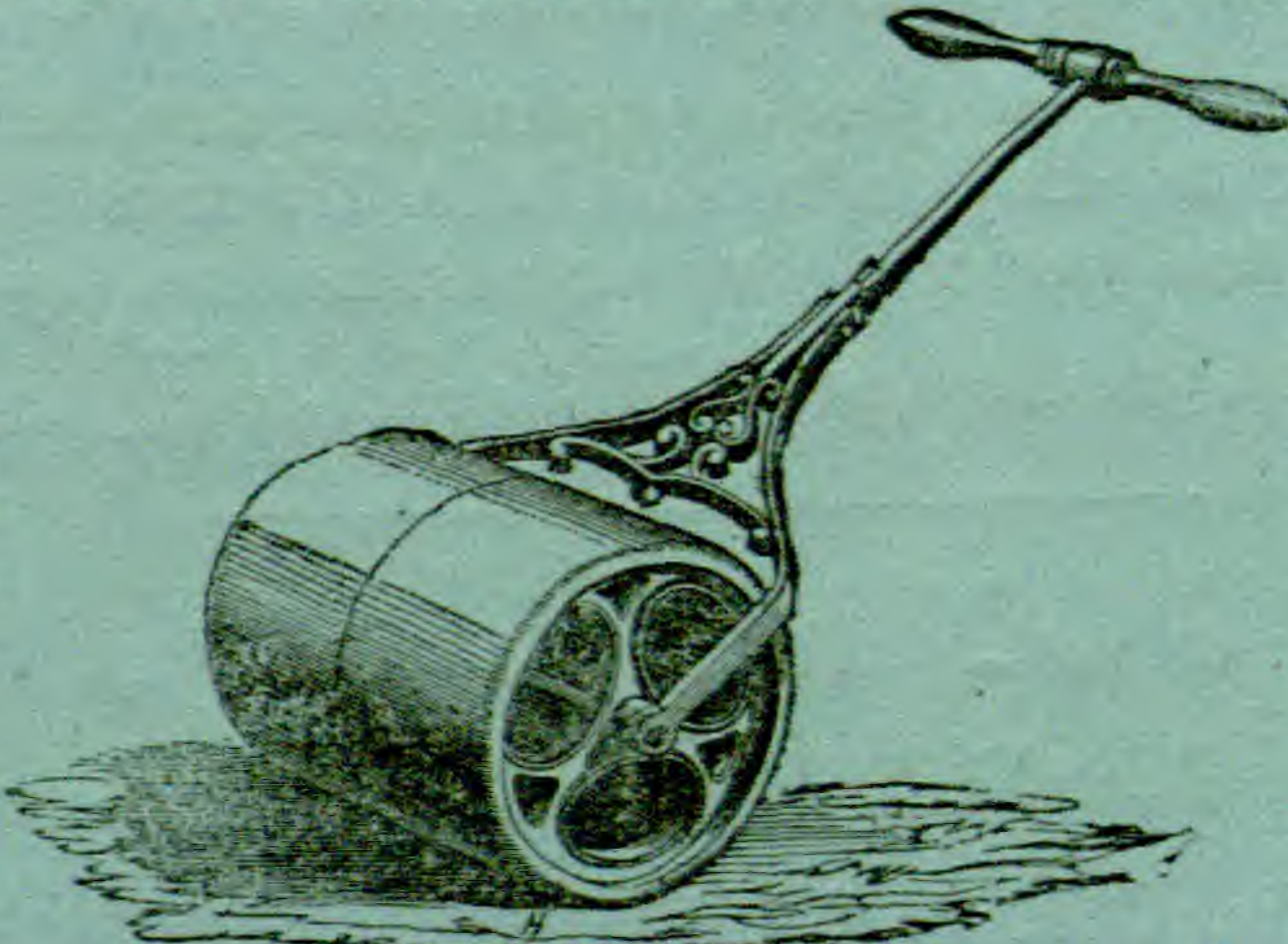
## GREEN'S IMPROVED NEW PATENT ROLLER,

FOR  
LAWNS, DRIVES, BOWLING GREENS, CRICKET FIELDS, AND GRAVEL PATHS.  
SUITABLE FOR HAND OR HORSE POWER.

### PRICES OF HAND ROLLERS.

Delivered at the principal  
Railway Stations in England.

Diam. 30 in., len. 32 in.	£7 10
" 24 " 26 "	4 10
" 20 " 22 "	3 10
" 16 " 17 "	2 15



### PRICES OF ROLLERS FITTED WITH SHAFTS

Suitable for Pony or Horse  
Power.

Diam. 30 in., len. 32 in.	£10 0
" 30 " 36 "	10 15
" 30 " 42 "	11 15
" 30 " 48 "	13 10
" 30 " 60 "	15 10
" 30 " 72 "	17 10
" 80 " 84 "	19 10

Thomas Green & Son, Smithfield Iron Works, Leeds; 44 & 45, Blackfriars Road, London, S.; and 19, Eden Quay, Dublin.



# HEATING BY HOT WATER.

---

It is now generally admitted that Buildings of any kind can be more effectually warmed by Hot Water than by any other means; but as so much depends on the way in which the Apparatus is fixed, it is of the greatest importance that it be done by experienced men.

J. JONES & SONS are prepared to estimate for Warming, to any extent—

GREENHOUSES.	CHURCHES.	FACTORIES.
CONSERVATORIES.	CHAPELS.	OFFICES.
VINERIES.	SCHOOLS.	WORKSHOPS.
HOTHOUSES.	READING ROOMS.	WAREHOUSES.
FORCING PITS.	LECTURE ROOMS.	DRYING ROOMS.
PEACH HOUSES.	BILLIARD ROOMS.	CELLARS.
PINE STOVES.	HALLS AND PASSAGES.	COACH-HOUSES.
ORCHARD HOUSES.	BATHS.	HARNESS ROOMS.

J. JONES & SONS' Apparatus is simple in construction, moderate in cost, and economical in working.

It is equally available for the Amateur's Greenhouse, or the longest range of Forcing Houses; for the smallest Chapel or the largest Church; for Private Offices or those of Public Companies.

It is admirably adapted for Dwelling Houses, as coils of pipes can be placed in any part, for warming the various rooms. One or more Baths may be heated from the same boiler, and a constant supply of hot water obtained in any part of the house.

For Warehouses and Workshops this system of heating is unsurpassed, as it is not only the means of keeping goods dry, but it also adds to the comfort of the workpeople, and thereby effects a saving in labour.

J. JONES & SONS recommend boilers of all kinds being set in brickwork, if possible; but portable boilers can be supplied, if required.

---

**MATERIALS.**—All Materials supplied will be of the best quality.

**DELIVERY.**—Boilers of various kinds, and pipes and connections, being always in stock, can, at a very short notice, be sent to any part.

**FIXING.**—The Fixing will be done by experienced men, fully capable of finishing properly any work they may undertake; and J. JONES & SONS are prepared to guarantee the effectual working of any apparatus fixed by their own men.

**ESTIMATES.**—Plans and Estimates will be sent on application.

---

**J. JONES & SONS,**  
**IRON MERCHANTS AND HORTICULTURAL ENGINEERS**  
6, BANKSIDE, SOUTHWARK, LONDON, S.E.



Third Series.

No. 272.

VOL. XXIII. AUGUST.

[Price 3s. 6d. col<sup>d</sup>. 2s. 6d. plain.]

OR No. 967 OF THE ENTIRE WORK.

CURTIS'S  
BOTANICAL MAGAZINE,

COMPRISING

THE PLANTS OF THE ROYAL GARDENS OF KEW,  
AND OF OTHER BOTANICAL ESTABLISHMENTS IN GREAT BRITAIN,  
WITH SUITABLE DESCRIPTIONS;

BY

JOSEPH DALTON HOOKER, M.D., F.R.S. L.S. & G.S.,

Director of the Royal Botanic Gardens of Kew.



~~~~~  
Nature and Art to adorn the page combine,  
And flowers exotic grace our northern clime.  
~~~~~

LONDON:

L. REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

1867.



*Now ready, Imperial 4to, with Six Beautifully-coloured Plates, price 16s., Part I. of*  
**WILD FLOWERS OF BRITISH NORTH AMERICA.**

BY MRS. MILLER, Authoress of 'The Wild Flowers of Nova Scotia.'

To be completed in Four Parts.

L. REEVE AND CO., 5, HENRIETTA STREET, COVENT GARDEN.

---

**HYACINTHS AND OTHER DUTCH BULBS.**

WILLIAM CUTBUSH AND SON beg to announce that their Catalogue of the above is now ready, and will be sent on prepaid application.

The Bulbs are unusually fine this Season.

HIGHGATE NURSERIES, LONDON, N.

---

**BALSAMS.**

F. AND A. SMITH beg to announce that their unequalled Collection of the above is Now in Bloom, and will well repay a visit.

THE NURSERIES, DULWICH, S.

---

**TRICOLORED GERANIUMS.**

F. AND A. SMITH will forward by post a Collection of Leaves, from their beautiful Tricolored Geraniums, on receipt of 1s. 6d. stamps, returnable to purchasers.

THE NURSERIES, DULWICH S.

---

**SUPERB NEW LATE GRAPE,**  
**“MRS. PINCE’S BLACK MUSCAT,”**

TO BE SENT OUT THIS MONTH.

AS A HIGH-FLAVOURED LATE GRAPE ITS EQUAL DOES NOT EXIST.

See former Advertisements in the leading Horticultural Journals. See 'Fruit Manual,' 'Garden Oracle,' and other Horticultural Works.

LUCOMBE, PINCE, AND CO., to prevent disappointment, beg to inform the Public that, owing to numerous Orders received, they have only very few Vines of the fruiting size to offer; but Orders, if sent now, can be executed this Month.

The Public is earnestly invited to see the Vines now fruiting, or send for Testimonials to them.

**EXETER NURSERY, EXETER.**

N.B.—Their beautiful New Seedling Gloxinias and Achimenes will be sent out at the same time. See previous Advertisements.

---

**EDGINGTON'S GARDEN NETTING**, the cheapest and most durable, 1d. per square yard, or in Quantities of 250, 500, or 1000 Yards, carriage free.

**EDGINGTON'S RICK CLOTHS** for Sixty-two Years have maintained their celebrity as the best.

**EDGINGTON'S MARQUEES** and **GARDEN TENTS** are the prettiest.

**EDGINGTON'S MARQUEES**, for hire, are the most handsome and capacious.

**HAYTHORN'S** and **WALLER'S NETTINGS**. Samples and material free on application.

Be particular—**FREDERICK EDGINGTON** and Co., Thomas Street, Old Kent Road, London, S.E.

A Liberal Discount to the Trade!

International Exhibition, 1862, Class XIX. Honourable Mention.







TAB. 5656.

EPIDENDRUM CNEMIDOPHORUM.

*Sheathed Epidendrum.*

Nat. Ord. ORCHIDÆ.—GYNANDRIA MONANDRIA.

*Gen. Char. (Vide supra, TAB. 5336.)*

EPIDENDRUM (Spathium) *cnemidophorum*; spathis plurimis foliaceis equitantibus obtusis, racemo multifloro sessili cernuo simplici vel (rarius) paniculato, bracteis linearibus, sepalis oblongis obtusis, petalis linearibus, columnâ sigmoideâ, labelli lobis carnosissimis integerrimis lobis lateralibus rotundatis, intermedio cuneato bilobo rotundato, callis 2 maximis lineisque tribus elevatis quarum intermedia major. *Lindl. Fol. Orch.*

EPIDENDRUM *cnemidophorum*. *Lind. Fol. Orch.*

This most remarkable plant was long since discovered by the late Mr. Skinner, who laboured ineffectually for many years to introduce it alive into our gardens. At length however his perseverance was rewarded, and he had the satisfaction of receiving, early in 1864, a cargo of some twenty or thirty specimens, all in the most perfect condition, and of which some were sold at Stevens's Rooms, while others, with his wonted generosity, were distributed amongst his friends. Among the latter Sir Philip Egerton was not forgotten, and from a particularly fine specimen that flowered at Oulton, and which was exhibited at South Kensington in April last, Mr. Fitch's very characteristic representation was obtained. Even this however by no means conveys an adequate idea of the stately appearance presented by the plant, the stems of which were when exhibited already some five feet high, while a dozen still more vigorous growths were preparing to follow.

In its native country (Guatemala) it is found at an elevation of at least 7000 feet, and it must consequently be kept cool, if we would expect it to thrive in our collections. At Oulton it receives little more than ordinary greenhouse

AUGUST 1st, 1867.



treatment, and with me it succeeds perfectly in the Mexican house. Patience however will have to be exercised, for—even in Guatemala—it takes nearly seven years to grow a really fine plant; but this when once obtained will remain a sort of heirloom for generations. The roots being very large and fleshy, it requires abundant pot-room, the pots being filled with a mixture of broken potsherds, sphagnum, and fibrous peat.

Mr. Skinner once showed me a clever model of this plant executed in coloured paper, and which he obtained from the nuns of some Guatemala convent, in whose garden it was cultivated for the sake of its flowers. The white background of these, contrasted with the rich spotting on the inner side, does, indeed, produce a very striking effect, and no doubt attracted the attention of the sisterhood. This model showed a compound raceme a foot or more long, which I expect will be at least equalled by those of the plant at Oulton when it flowers again.

DESCR. A robust terrestrial plant, throwing out numerous fleshy *roots*, and forming tufts of stout leafy *stems*, which are from half an inch to an inch thick, and from four to six feet high. *Leaves* from six to ten inches long, glossy, dark green and sharp-pointed. From the extremity of the stem there issues forth a nodding, many-flowered (sometimes, though rarely, compound) *raceme*, protected by numerous blunt, sheathing, equitant, pale green *spathes*. *Flowers* fleshy, on white *pedicels* three times as long as themselves. *Sepals* oblong, obtuse, broader than the linear *petals*, both being white at the back, and of a pale yellow, mottled with rich reddish brown inside. *Lip* divided into three fleshy lobes, of which those at the sides are rounded and entire, while that in the centre is wedge-shaped and deeply cleft into two portions, which are divergent and rounded; its colour is a creamy white, with rosy tints. *Column* somewhat curved and club-shaped, about the same length as the lip.—*J. B.*

---

Fig. 1. Front view of lip and column, *slightly magnified*. 2. Diminished outline of the plant.





W. Fitch, del. et lith.

Vincent Brooks, Imp.



TAB. 5657.

BEGONIA BOLIVIENSIS.

*Bolivian Begonia.*

Nat. Ord. BEGONIACEÆ.—MONÆCIA POLYANDRIA.

*Gen. Char. (Vide supra, TAB. 4131.)*

BEGONIA (§ Barya) *Boliviensis*; herbacea, glabra, ramosa, foliis breviter petiolatis oblongo-lanceolatis acuminatis valde inæquilateralibus basi obliquis subcordatis penninerviis irregulariter inciso-serratis, dentibus setaceis, stipulis oblongo-lanceolatis serratis, pedunculis axillaribus pollicaribus 2-floris fl. ♂ et ♀, bracteis amplis cucullatis serratis, floribus magnis coccineo-cinnabarinis, perianthii foliolis lanceolatis ♂ 4, ♀ 5, filamentis in conum elongatum alte connatis, antheris obtusis, stigmatibus 3 ramis fascia papillosa basi continua cinctis, ovario 3-ptero, placentis alte 2-fidis, segmentis utrinque ovuliferis.

BEGONIA *Boliviensis*. DC. *Prodr.* v. 15. pars 1. p. 287.

The very beautiful plant here figured was procured by Messrs. Veitch from Bolivia, through their collector, Mr. Pearce, and was exhibited for the first time at the International Horticultural Show in Paris in May last, when it attracted more of the attention both of botanists and horticulturists than any other plant then brought to that magnificent floral exhibition.

*Begonia Boliviensis* was discovered by Weddell in the Cordillera of Bolivia, and belongs to a very small section of the genus, to which the (generic) name of *Barya* was given by Klotzsch; the only other species being the *B. monadelphæ*, Ruiz and Pav., a native of Peru. In habit the Baryas singularly resemble the species belonging to the subgenus *Casparya*, Kl., but differ wholly in the structure of their stigmas.

DESCR. Glabrous. *Root* a small tube. *Stem* herbaceous, two to three feet high, sparingly branched. *Branches* cylindrical, green, translucent. *Leaves* on very short petioles, four to five inches long by one to one and a half inches broad,

AUGUST 1ST, 1867.



lanceolate or ovate-lanceolate, acuminate, very unequal at the base, the larger lobe rounded, acutely doubly serrate and obscurely lobulate, feather-veined, bright-green above, with red margins, pale below. *Stipules* oblong-lanceolate, toothed, recurved, green. *Peduncles* axillary, one inch long, two-flowered, male and female. *Bracts* green, broadly ovate, cucullate, toothed. *Pedicels* one inch long, red. *Flowers* drooping, bright cinnabar-scarlet; ♂ two inches long, with four lanceolate perianth-leaflets two inches long, ♀ with five half as long. *Stamens* united into a long conical column; *anthers* small, oblong, yellow. *Ovary* three-winged; *styles* three; *stigmas* two-lobed, lobes with a spiral band that is continuous at their bases. *Placentas* bifid, with ovules on both surfaces of the segments.—*J. D. H.*

---

Fig. 1. Staminal column. 2 and 3. Stamen. 4. Pistil. 5. Transverse section of ovary :—*all magnified.*







PROSTANTHERA NIVEA.

*Snow-white Prostanthera.*

Nat. Ord. LABIATÆ.—DIDYNAMIA GYMNOSPERMIA.

*Gen. Char.* Calyx campanulatus; tubus brevis, 13-striatus; labia indivisa fructus clausa. Corolla tubo brevi amplo, fauce campanulata, labio superiore erecto subplano, inferiore patente. Stamina 4; antheræ 2-loculares, loculis parallelis, connectivo subtus calcarato. Stylus apice 2-fidus, lobis subæqualibus.—Frutices glandulosi. Flores axillares v. racemosi sub calyce bracteis parvis instructi.

PROSTANTHERA nivea; glaberrima, foliis linearibus v. lineari-lanceolatis margine (sicco) revolutis, racemis laxis, calycibus glabris, labio superiore maximo, inferiore dimidio brevior ciliato, connectivi calcare altero brevi, altero elongato loculum bis superante.

PROSTANTHERA nivea. Cunn. in Benth. Lab. p. 452. Benth. in DC. Prodr. v. 12. p. 561.

The *Prostantheras* belong to a class of hard-wooded plants, the cultivation of which has of late years given place to that of innumerable varieties of Fuchsias and other more gaudy but in many respects less interesting things, that now form the staple of our greenhouse furniture. There are some twenty-six species described by Bentham, all Australian. Many of them are pretty and graceful, and they further flower at a season when little else that is not forced for the purpose is to be had in the conservatory. *P. nivea* is a native of rocky hills in New South Wales and Victoria, where it was discovered by the late Allan Cunningham (formerly of Kew). The specimen here figured was raised from seeds sent to Kew by Dr. Mueller, and flowered in May of the present year.

DESCR. A glabrous bush, three to four feet high. Stems and branches slender, twiggy, upper four-angled; branchlets erecto-patent. Leaves one to one and a half inches long, spreading, linear or linear-lanceolate, acute, quite entire, pale-green, nearly flat, margins revolute when dry. Flowers

AUGUST 1ST, 1867.



forming loose racemes, being solitary in the axils of the uppermost leaves, shortly pedicelled, bracteoles linear. *Calyx* green; tube hemispherical, grooved; *lobes* ciliolate, upper obscurely three-lobed, lower much smaller, obtuse. *Corolla* two-thirds of an inch in diameter, white with pale lilac lobes, and a few yellow-brown spots on the throat at the base of the lower lip; upper lip short, two-lobed. *Leaves* spreading, deeply three-lobed, lateral obtuse, middle truncate and emarginate, all pilose and crisped at the margin. *Anther* with one flat spur that is erose at the tip, and as long as the cell, the other adnate with the connective, and much smaller. *Ovary* subglandular; *stigma* 2-fid.—*J. D. H.*

---

Fig. 1. Flower. 2 and 3. Stamens. 4. Calyx. 5. Pistil:—*all magnified.*





W. F. F. de la lith.

Vincent Brooks, Imp.



CESTRUM ELEGANS.

*Purple Habrothamnus.*

Nat. Ord. SOLANACEÆ.—PENTANDRIA MONOGYNIA.

*Gen. Char.* Calyx 5-fidus 5-dentatus v. 5-partitus. Corolla infundibuliformi-tubulosa, tubo ventricoso, fauce constricta, limbo parvo 5-lobo. Stamina 5, tubo adnata, rarius libera; antheræ 2-lobæ, longitudinaliter dehiscentes. Ovarium breviter stipitatum, stipite disco circumdato, 2-loculare, septo medio placentifero; stylus simplex, stigmatibus vario; ovula pauca. Bacca ovoidea v. globosa, 1-2-locularis, oligosperma. Semina compressa, albuminosa; cotyledones parvæ, foliaceæ.—Frutices v. arbusculæ. Folia solitaria v. gemina, petiolata, penninervia. Flores racemosi.

CESTRUM (Habrothamnus) *elegans*; fruticosa, ramis herbaceis teretibus pubescenti-tomentosis, foliis petiolatis ovato-lanceolatis acuminatis basi rotundatis, cymis terminalibus, calyce obconico glabro, corollæ laciniis acutis.

CESTRUM *elegans*. Schlecht. in Linn. v. 19. p. 261. Dunal in DC. Prodr. v. 13. pars 1. p. 600.

HABROTHAMNUS *elegans*. A. Brong. Herb. Gen. de l'Amat. ser. 2. v. 4. et Hort. Univ. v. 5. p. 293.

HABROTHAMNUS *purpureus*. Lindl. Bot. Reg. 1844, t. 43, et Misc. p. 12.

The figures hitherto published by Van Houtte and Lindley give no idea of the size and beauty of the flower of this fine plant, and these are succeeded by magnificent grape-like clusters of deep purple globular berries one-third of an inch in diameter.

The *Habrothamnus* section of *Cestrum* are all natives of Mexico. Several species are described, evidently very closely, if not too closely related. The present grows at elevations of 3-4000 feet, and succeeds well in a temperate house. The plant fruited was sent by Mr. Henderson, of Wellington Nursery.

The genus *Habrothamnus* of Endlicher, established as a section by Schlechtendal, has been reduced again to *Cestrum* by Dunal in the 'Prodromus' of A. De Candolle, in conformity with which work we have described the above species.

AUGUST 1ST, 1867.



DESCR. A large bush or small tree, with graceful pendulous leafy branches; branchlets cylindrical, pubescent. *Leaves* alternate, shortly petioled, lanceolate or oblong-lanceolate, quite entire, acuminate, three to four inches long, pubescent, pilose on the nerves beneath, deep-green, membranous, rounded acute or obscurely cordate at the base. *Flower* in dense pendulous, thyrsoïd, compound racemes, one inch long, purplish-red, shortly petioled. *Calyx* short, tube turbinate, green; *lobes* broadly triangular-ovate, acuminate, erect. *Corolla* tubular, gradually inflated, then contracted below the mouth, glabrous; limb short, with five spreading triangular acute lobes; mouth and inner surface glabrous. *Stamens* inserted two-thirds of the way down the tube; filaments filiform; *anthers* included, small, yellow. *Ovary* globose; *style* slender; *stigma* capitate, truncate, included. *Berry* globose, half to three-quarters of an inch in diameter, fleshy, deep red-purple, two-celled, many-seeded.—*J. D. H.*

---

Fig. 1. Flower. 2. Vertical section of corolla. 3. Pistil. 4. Transverse section of fruit:—all but Fig. 4, magnified.







TAB. 5660.

AGAVE XYLONACANTHA.

*Woody-thorned Agave.*

Nat. Ord. AMARYLLIDÆ.—HEXANDRIA MONOGYNIA.

*Gen. Char. (Vide supra, TAB. 5333.)*

AGAVE *xylonacantha*; acaulis, foliis subsquarroso-patentibus ensiformibus acuminatis apice subtrigono pungente glaucis granulatis supra planiusculis subtus convexis ecarinatis estriatis, margine cartilagineo albo aculeis dilatatis simplicibus v. furcatis instructo, scapo elato bracteis longe setaceis numerosis instructo, racemo densifloro, pedunculis pedicellis-que brevibus, bracteolis subulatis, perianthii tubo brevissimo lobis oblongis obtusis erectis viridibus ovario cylindrico æquilongis. *C. Koch, Wochenschr.* 1861, p. 39.

AGAVE *xylonacantha*. *Salm-Dyck, in Bonplandia*, v. 7. p. 92. *Jacobi in Otto, Hamburg. Garten- und Blumen-Zeitung*, v. 20. p. 547.

The 'Botanical Magazine' seems especially adapted for the publication of that noble class of plants that few can afford to cultivate, and which seldom flower in cultivation, but which are of equal interest to the scientific botanist and to the horticulturist. Amongst these the Aloes and Agaves hold, after the Palms, the place of honour, and their value for decorative purposes is becoming yearly more apparent.

The subject of the present Plate is a native of Real del Monte, Mexico, whence it was sent to the Royal Gardens in 1846, by Mr. Repper, to whom the Gardens are indebted for many fine plants.

DESCR. Stemless. *Leaves* spreading all round, two to three feet long, three to five inches broad, thick, rigid, and succulent, rough with minute granulations, but neither keeled, striated, nor ribbed, plane above, convex beneath, glaucous-green, ensiform-lanceolate, gradually acuminate to the pungent trigonous apex; margin broad white, cartilaginous, beset with flat-lobed, white, vertically compressed, simple or lobed spinous processes, the lobes irregular, often uncinatè. *Scape*

AUGUST 1st, 1867.



nine to ten feet high, strict, rather stout, green, beset with long, strict, subulate bracts, two to eight inches long. *Flowers* in a very dense, elongate, strict, erect raceme, three to four feet long, clustered in twos and threes on short, stout peduncles, that are subtended by a reflexed subulate bract one and a half to two inches long; each flower, with the stamens, three inches long; pedicels very short; bracteoles minute, subulate. *Ovary* cylindric, one inch long, glabrous, green. *Perianth* tube very short; lobes linear-oblong, obtuse, erect, about as long as the ovary, green. *Stamens* as long as the ovary and perianth, erect. *Filaments* yellow with a red tinge, strict. *Anthers* yellow, linear, two-thirds of an inch long. *Style* slender, shorter than the stamens; *stigma* small, capitate.—*J. D. H.*

---

Fig. 1. Reduced figure of the whole plant. 2 and 3. Portions of the leaf. 4. Ditto of the raceme :—*both of nat. size.*



## NEW SERIES OF NATURAL HISTORY FOR BEGINNERS.

*Now Ready.*

- BRITISH BUTTERFLIES AND MOTHS**; an Introduction to the Study of the LEPIDOPTERA of Britain. By H. T. STAINTON. Crown 8vo, 16 Coloured Steel Plates, and Wood-Engravings, 10s. 6d.
- BRITISH GRASSES**; an Introduction to the Study of the Grasses found in the British Isles. By M. PLUES. Crown 8vo, 16 Coloured Plates, and 100 Wood-Engravings, 10s. 6d.
- BRITISH BEETLES**; an Introduction to the Study of our Indigenous COLEOPTERA. By E. C. RYE. Crown 8vo, 16 Coloured Steel Plates, and Wood-Engravings, 10s. 6d.
- BRITISH BEES**; an Introduction to the Study of our Natural History and Economy of the Bees indigenous to the British Isles. By W. E. SHUCKARD. Crown 8vo, 16 Coloured Steel Plates, and Woodcuts, 10s. 6d.
- BRITISH SPIDERS**; an Introduction to the Study of the ARANEIDÆ found in Great Britain and Ireland. By E. F. STAVELEY. Crown 8vo, 16 Coloured Plates, and 44 Wood-Engravings, 10s. 6d.
- BRITISH FERNS**; an Introduction to the Study of the FERNS, LYCOPODS, and EQUISETA indigenous to the British Isles. With Chapters on the Structure, Propagation, Cultivation, Diseases, Uses, Preservation, and Distribution of Ferns. By M. PLUES. Crown 8vo, 16 Coloured Plates, and 55 Wood-Engravings, 10s. 6d.
- BRITISH SEAWEEDS**; an Introduction to the Study of the Marine ALGÆ of Britain. By S. O. GRAY. Crown 8vo, 16 Coloured Plates, 10s. 6d. [Nearly ready.]

*Just Published.*

- A SECOND CENTURY OF ORCHIDACEOUS PLANTS**, selected from the subjects published in Curtis's 'Botanical Magazine' since the issue of the 'First Century.' Edited by JAMES BATEMAN, Esq., F.R.S. Royal 4to. Parts I. to IX., each with 10 Coloured Plates, 10s. 6d., now ready. To be completed in 10 parts.
- MONOGRAPH OF ODONTOGLOSSUM**, a Genus of the Vandeous Section of Orchidaceous Plants. By JAMES BATEMAN, Esq., F.R.S. Imperial folio. Parts I. to IV., each with 5 Coloured Plates, and occasional Wood Engravings, 21s.
- HANDBOOK OF THE BRITISH FLORA**; a Description of the Flowering Plants and Ferns indigenous to, or naturalized in, the British Isles. For the Use of Beginners and Amateurs. By G. BENTHAM, F.R.S. *New Edition.* Crown 8vo, 12s.
- THE ILLUSTRATED BRITISH FLORA**; a Description (with a Wood-Engraving, including dissections of each species) of the Flowering Plants and Ferns indigenous to, or naturalized in, the British Isles. By G. BENTHAM, F.R.S. Demy 8vo, 2 vols., 1295 Wood-Engravings. £3. 10s.
- HANDBOOK OF THE NEW ZEALAND FLORA**; a Systematic Description of the Native Plants of New Zealand, and the Chatham, Kermadec's, Lord Auckland's, Campbell's, and Macquarrie's Islands. By Dr. J. D. HOOKER, F.R.S. Demy 8vo. Part I., 16s.; Part II., 14s.; or complete in one vol. 30s. Published under the auspices of the Government of that Colony.
- FLORA AUSTRALIENSIS**; a Description of the Plants of the Australian Territory. By G. BENTHAM, F.R.S., assisted by F. MUELLER, F.R.S. Demy 8vo. Vol. I., II., and III., 20s. each. Published under the auspices of the several Governments of Australia.
- THE EDIBLE MOLLUSKS OF GREAT BRITAIN AND IRELAND**, with Recipes for cooking them. By M. S. LOVELL. Crown 8vo, 12 Coloured Plates, 8s. 6d.
- SUNSHINE AND SHOWERS**; their Influencees throughout Creation. A Compendium of Popular Meteorology, Curiosities of the Weather, and Weather Wisdom. By ANDREW STEINMETZ, Esq. Crown 8vo, Cuts, 7s. 6d.
- "The book is a well-written one, and contains such a variety of interesting information that its possession is desirable, even though the purchaser may have no intention of setting up as a weather prophet. Some of the very latest discoveries, both in science and the useful arts, will be found treated on in a way that is quite the reverse of the ordinary dryness and dullness of a scientific treatise."—*United Service Magazine.*
- THE REASONING POWER IN ANIMALS.** By the Rev. J. S. WATSON. Crown 8vo, 9s.
- "Full of entertainment, of instruction, and of matter suggestive of thought on that strange world of utterly mysterious life with which we come into daily contact, but of the essence of which we know scarcely anything."—*Daily News.*
- METEORS, AEROLITES, AND FALLING STARS.** By Dr. T. L. PHIPSON. Crown 8vo, Woodcuts and Lithographic Frontispiece, 6s.
- "Well calculated to repay perusal. Dr. Phipson has brought together, in a condensed, but by no means a dry form, a great number of interesting facts, and a large amount of reasoning which carries with it, in most cases, the conviction that his views are correct."—*Scientific Review.*

L. REEVE AND CO., 5, HENRIETTA STREET, COVENT GARDEN.



# HEATING BY HOT WATER.

---

It is now generally admitted that Buildings of any kind can be more effectually warmed by Hot Water than by any other means; but as so much depends on the way in which the Apparatus is fixed, it is of the greatest importance that it be done by experienced men.

J. JONES & SONS are prepared to estimate for Warming, to any extent—

GREENHOUSES.	CHURCHES.	FACTORIES.
CONSERVATORIES.	CHAPELS.	OFFICES.
VINERIES.	SCHOOLS.	WORKSHOPS.
HOTHOUSES.	READING ROOMS.	WAREHOUSES.
FORCING PITS.	LECTURE ROOMS.	DRYING ROOMS.
PEACH HOUSES.	BILLIARD ROOMS.	CELLARS.
PINE STOVES.	HALLS AND PASSAGES.	COACH-HOUSES.
ORCHARD HOUSES.	BATHS.	HARNESS ROOMS.

J. JONES & SONS' Apparatus is simple in construction, moderate in cost, and economical in working.

It is equally available for the Amateur's Greenhouse, or the longest range of Forcing Houses; for the smallest Chapel or the largest Church; for Private Offices, or those of Public Companies.

It is admirably adapted for Dwelling Houses, as coils of pipes can be placed in any part, for warming the various rooms. One or more Baths may be heated from the same boiler, and a constant supply of hot water obtained in any part of the house.

For Warehouses and Workshops this system of heating is unsurpassed, as it is not only the means of keeping goods dry, but it also adds to the comfort of the workpeople, and thereby effects a saving in labour.

J. JONES & SONS recommend boilers of all kinds being set in brickwork, if possible; but portable boilers can be supplied, if required.

---

**MATERIALS.**—All Materials supplied will be of the best quality.

**DELIVERY.**—Boilers of various kinds, and pipes and connections, being always in stock, can, at a very short notice, be sent to any part.

**FIXING.**—The Fixing will be done by experienced men, fully capable of finishing properly any work they may undertake; and J. JONES & SONS are prepared to guarantee the effectual working of any apparatus fixed by their own men.

**ESTIMATES.**—Plans and Estimates will be sent on application.

---

**J. JONES & SONS,**  
**IRON MERCHANTS AND HORTICULTURAL ENGINEERS,**  
6, BANKSIDE, SOUTHWARK, LONDON, S.E.



Third Series.

No. 273.

VOL. XXIII. SEPTEMBER.

[Price 3s. 6d. col<sup>d</sup>. 2s. 6d. plain.]

OR No. 968 OF THE ENTIRE WORK.

CURTIS'S  
BOTANICAL MAGAZINE,

COMPRISING

THE PLANTS OF THE ROYAL GARDENS OF KEW,  
AND OF OTHER BOTANICAL ESTABLISHMENTS IN GREAT BRITAIN,  
WITH SUITABLE DESCRIPTIONS;

BY

JOSEPH DALTON HOOKER, M.D., F.R.S. L.S. & G.S.,

Director of the Royal Botanic Gardens of Kew.



~~~~~  
Nature and Art to adorn the page combine,  
And flowers exotic grace our northern clime.  
~~~~~

LONDON:

L. REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

1867.



# GREEN'S PATENT SILENS MESSOR,

OR

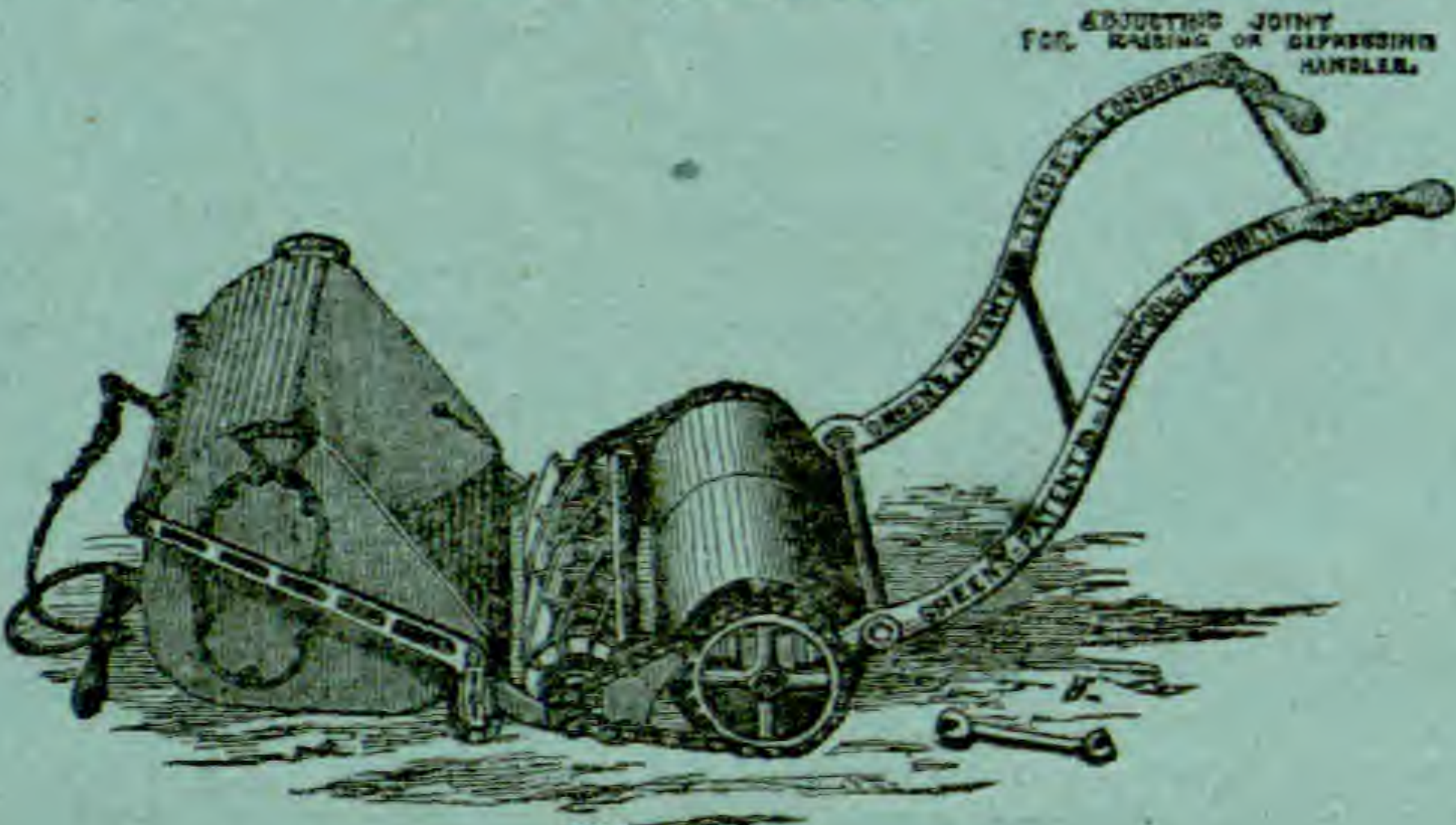
NOISELESS LAWN MOWING, ROLLING, AND COLLECTING MACHINES.  
 FITTED WITH PATENT SELF-SHARPENING CYLINDER CUTTERS.

By Special Appointment  
 Sole Manufacturer



To Her Most Gracious  
 Majesty the Queen.

Every Machine is warranted to give entire satisfaction, and if not approved of can be returned unconditionally.



Green's Patent Lawn Mowers have proved to be the best, and have carried off every prize that has been given in all cases of competition.

## PRICES OF HAND MACHINES.

To cut 10 inches ...	£3 10 0	... Suitable for a Lady	To cut 18 inches ...	£7 10 0	... Suitable for one person
" 12 "	4 10 0	" "	" 20 "	8 0 0	... Suitable for two persons
" 14 "	5 10 0	... Suitable for one person	" 22 "	8 10 0	" "
" 16 "	6 10 0	" "	" 24 "	9 0 0	" "

Prices of Horse, Pony, and Donkey Machines, including patent self-delivery box; cross stay complete; suitable or attaching to ordinary chaise-traces or gig harness.

To cut 26 inches ...	£13 0 0	... } Leather Boots for	To cut 30 inches ...	£21 0 0	... } Leather Boots for
" 28 "	15 0 0	... } Donkey, 18s.	" 36 "	24 0 0	... } Pony, 22s.
" 30 "	17 0 0	... }	" 42 "	27 0 0	... } Leather Boots for
			" 48 "	30 0 0	... } Horse, 26s.

The 26, 28, and 30 inches can easily be worked by a donkey, or by two men, on an even lawn, the 30 and 36 inches by a pony, and 42 and 48 inches by a carriage horse; and, as the Machines make no noise in working, the most spirited animal can be employed without fear of its running away, or in any way damaging the Machine.

Both the Horse, Pony, Donkey, and Hand Machines possess (over all other Makers) the advantages of self-sharpening: the cutters being steel on each side, when they become dull or blunt by running one way round the cylinder, can be reversed again and again, bringing the opposite edge of the cutter against the bottom blade, when the Machine will cut equal to new. Arrangements are made that the cylinder can be reversed, by any unexperienced person, in two or three minutes.

The above Machines are made from the best materials, and of superior workmanship; are delivered Carriage Free to all the principal Railway Stations and Shipping Ports in England.

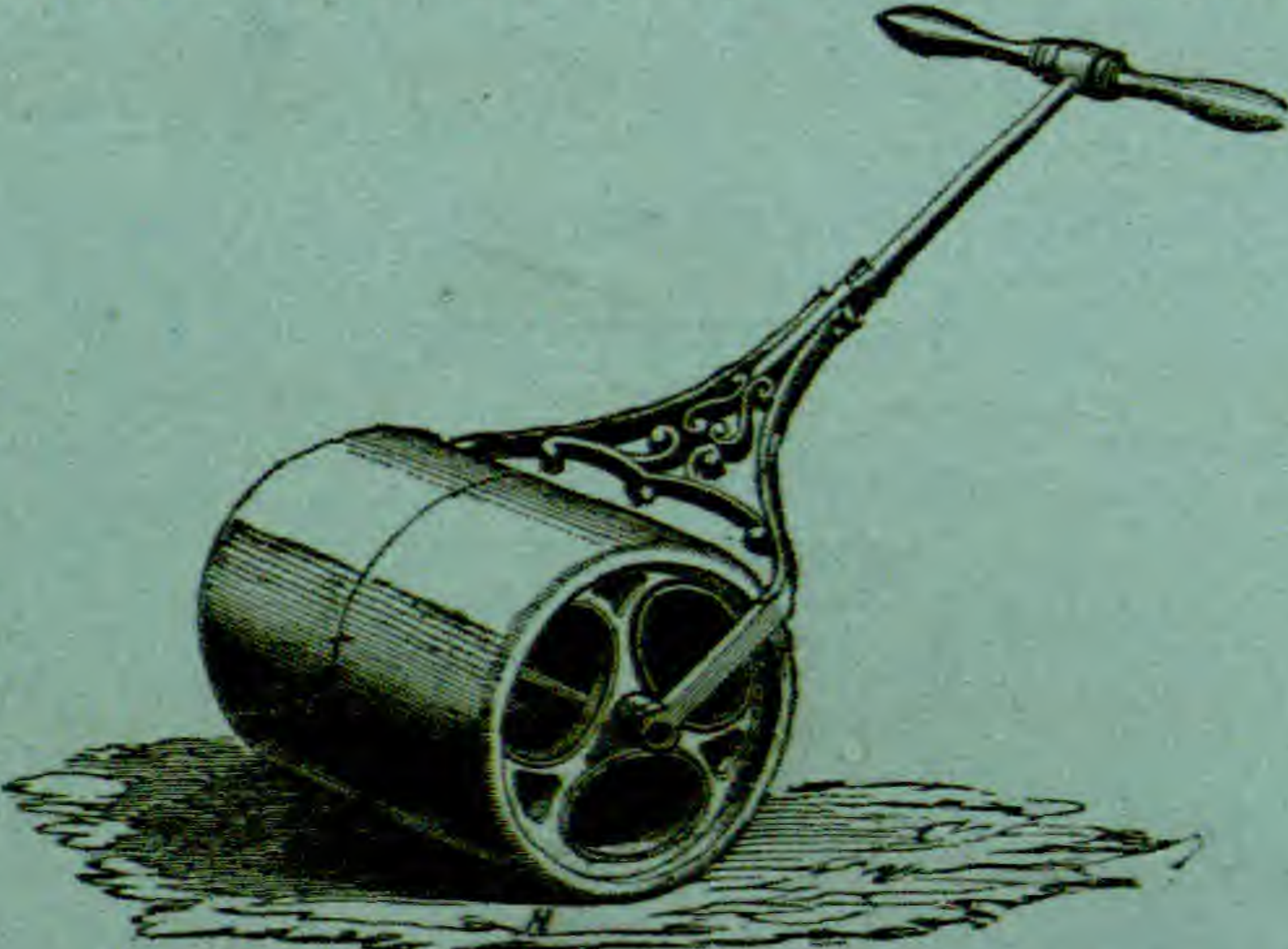
# GREEN'S IMPROVED NEW PATENT ROLLER,

FOR  
 LAWNS, DRIVES, BOWLING GREENS, CRICKET FIELDS, AND GRAVEL PATHS.  
 SUITABLE FOR HAND OR HORSE POWER.

## PRICES OF HAND ROLLERS.

Delivered at the principal  
 Railway Stations in England.

Diam. 30 in., len. 32 in.	£7 10
" 24 " 26 "	4 10
" 20 " 22 "	3 10
" 16 " 17 "	2 15



## PRICES OF ROLLERS FITTED WITH SHAFTS Suitable for Pony or Horse Power.

Diam. 30 in., len. 32 in.	£10 0
" 30 " 36 "	10 15
" 30 " 42 "	11 15
" 30 " 48 "	13 10
" 30 " 60 "	15 10
" 30 " 72 "	17 10
" 80 " 84 "	19 10

Thomas Green & Son, Smithfield Iron Works, Leeds; 44 & 45, Blackfriars Road, London, S.; and 19, Eden Quay, Dublin.



# BOTANICAL MAGAZINE ADVERTISER.

*Now Ready, price 1s., free by post for 13 stamps.*

## EVERYBODY'S WEATHER-GUIDE.

The Use of Meteorological Instruments clearly explained; with Directions for securing at any time a Probable Prognostic of the Weather.

By A. STEINMETZ.

L. REEVE AND CO., 5, HENRIETTA STREET, COVENT GARDEN.

*Now ready, Imperial 4to, with Six Beautifully-coloured Plates, price 16s., Part I. of*

## WILD FLOWERS OF BRITISH NORTH AMERICA.

BY MRS. MILLER, Authoress of 'The Wild Flowers of Nova Scotia.'

To be completed in Four Parts.

L. REEVE AND CO., 5, HENRIETTA STREET, COVENT GARDEN.

## HYACINTHS AND OTHER DUTCH BULBS.

WILLIAM CUTBUSH AND SON beg to announce that their Catalogue of the above is now ready, and will be sent on prepaid application.

The Bulbs are unusually fine this Season.

HIGHGATE NURSERIES, LONDON, N.

## BEAUTIFUL FOXGLOVES.

J. IVERY AND SON can now supply New Seed of their fine strain of the above, in 1s., 1s. 6d., and 2s. 6d. packets; likewise plants to bloom next season, at 6s. per dozen.

A Plate of one of the Varieties will appear in the 'Floral Magazine' for October, 1867.

DORKING AND REIGATE NURSERIES.

## NEW ROSES FOR 1868.

### MESSRS. JOHN AND CHARLES LEE

HAVE PURCHASED THE STOCKS OF

### THE TWO FINEST NEW ROSES

Which have been exhibited on the Continent this season, and hope to exhibit them in London in June next, that the Public may judge of their merits before they are sent out.

**CLEMENCE RAOUX** (GRANGER).—Blush, edged and spotted Rose, of large size and perfect form; petals stout and very enduring, habit erect and vigorous. Gold Medal awarded at the Great Rose Show at Brie Comte Robert in July.

**EDWARD MORREN** (GRANGER).—Mons. Margottin thus describes this splendid Rose:—"It is in the way of *Jules Margottin*, but of a more delicate colour, of better form, more double, and much larger." First Prize awarded at the Exposition Universelle in Paris in July.

TO BE SENT OUT IN THE AUTUMN OF 1868.

ROYAL VINEYARD NURSERY AND SEED ESTABLISHMENT, HAMMERSMITH, W.

## DUTCH FLOWER-ROOTS.



### JAMES VEITCH AND SONS,

ROYAL EXOTIC NURSERY, CHELSEA, S.W.,

BEG TO ANNOUNCE THAT THEIR

### ANNUAL CATALOGUE OF DUTCH FLOWER-ROOTS,

CONTAINING ALSO

A SELECT LIST OF VEGETABLE SEEDS FOR AUTUMN SOWING,

Is now ready, and will be forwarded Post-Free on application.



## FRESH IMPORTED DUTCH FLOWER-ROOTS.

## MESSRS. SUTTON

HAVE RECEIVED THEIR FIRST CONSIGNMENT OF THE  
ABOVE IN EXCELLENT CONDITION, AND ARE NOW  
PREPARED TO EXECUTE ORDERS FOR

**SUTTON'S COMPLETE COLLECTIONS OF FLOWER-ROOTS,**  
FOR BLOOMING DURING WINTER AND SPRING.

## FOR POTS AND GLASSES.

Complete Collection (carriage free)	£2	2	0
" " (carriage free)	1	1	0
" " . . . . .	0	10	6

## FOR OPEN GROUND.

Complete Collection (carriage free)	£2	2	0
" " (carriage free)	1	1	0
" " . . . . .	0	10	6

**SUTTON'S COLLECTIONS OF HYACINTHS FOR EXHIBITION**

Include all the Varieties so much admired at the Spring Shows. Price 12s. per dozen, or £4. 4s. per hundred.  
CHEAPER ROOTS, 6s. and 9s. per dozen.

**HYACINTHS FOR BEDDING PURPOSES.**

3s. per dozen, 21s. per hundred.

*For Particulars of other Flower-Roots see*

**SUTTON'S AUTUMN CATALOGUE FOR 1867,**

Gratis and Post-free on application.

**SUTTON AND SONS, ROYAL BERKS SEED ESTABLISHMENT, READING.**

**THE "PRIZE" STRAIN OF CYCLAMEN PERSICUM SEED.**

This splendid Strain of Seed has passed entirely into the hands of B. S. WILLIAMS. It is the seed saved from the magnificent plants grown and shown by Mr. Wiggins, gardener to W. Beck, Esq., Isleworth, at the Spring Shows in the present year; they were in each instance awarded First Prize, and were the admiration of all the visitors. The flowers are one inch across, by an inch and a half in depth; the colours ranging from a bright carmine to a delicately tinted white, and pure white tipped with crimson; the leaves beautifully marbled; indeed, the leaves, apart from the flowers, possess a peculiar attraction in the diversity of their marbled surface. This seed should be sown as early in the Autumn as possible. None genuine unless the packets bear B. S. Williams's name and address. Some of these flowers were figured in the 'Floral Magazine.' Price, per packet, 1s. 6d., 2s. 6d., and 3s. 6d.

**THE "PRIZE" STRAIN OF POLYANTHUS.**

This beautiful Strain of one of the prettiest Spring-flowering plants was exhibited most successfully by Mr. Wiggins, of whom B. S. W. has purchased the entire stock and right of sale. None genuine unless the packets bear B. S. Williams's name and address. Price 1s., 2s. 6d., and 3s. 6d. per packet.

**OTHER CHOICE STRAINS OF SEED.**

JAMES'S CALCEOLARIA, 2s. 6d., 3s. 6d., and 5s. per packet.

WEATHERILL'S CINERARIA, 2s. 6d., 3s. 6d., and 5s. per packet.

WILLIAMS'S SUPERB STRAIN OF PRIMULA, Red, White, and Mixed, 2s. 6d., 3s. 6d., and 5s. per packet.

**CATALOGUE OF DUTCH BULBS NOW READY.**

B. S. WILLIAMS, VICTORIA AND PARADISE NURSERIES, UPPER HOLLOWAY, LONDON, N.  
(NEAR THE HIGHGATE ARCHWAY.)

## BARR AND SUGDEN,

### 12, KING STREET, COVENT GARDEN, W.C.

ORDERS 21s. AND UPWARDS SENT CARRIAGE PAID.

*Now Ready,*

**THE "GUIDE TO WINTER AND SPRING GARDENING."**

A copy, during the first week in September, will be sent free to each of our customers, also to intending purchasers on sending in their addresses.

The contents of the present edition of the 'Guide' will be found exceedingly interesting to those who are fond of bulbous plants. In addition to the usual "DUTCH BULBS," is given a selection of choice Cape, Japan, and other bulbous and tuberous-rooted plants; and as many of our customers and intending purchasers may be unacquainted with some of these, we have in anticipation prepared an album with coloured illustrations of most of them, and have placed it at the service of those who can make it convenient to call at our warehouse.

Collections of easily-cultivated Bulbs for out-door decoration, 10s. 6d., 21s., 42s., 63s., and 84s.  
Collections of easily-cultivated Bulbs for in-door decoration, 10s. 6d., 21s., 42s., 63s., and 84s.

**BARR AND SUGDEN, 12, KING STREET, COVENT GARDEN, W.C.**







TAB. 5661.

COLAX JUGOSUS.

*Furrowed-lipped Colax.*

Nat. Ord. ORCHIDÆ.—GYNANDRIA MONANDRIA.

*Gen. Char.* *Perianthium* vix ringens, in mentum breve productum, sub-globosum. *Sepala* et *petala* subæqualia, oblonga. *Labellum* unguiculatum, immobile, inappendiculatum, ungue brevi sublineari in laminam dilatatam 3-lobam dilatato. *Columna* semiteres, subelongata. *Anthera* carnosæ, subimmersa. *Pollinia* 4, obovoidea, caudiculæ membranaceæ elongatæ angustatæ adnata; glandula obscura. *Rostellum* 5-lobum.—*Herbæ pseudobulbosæ*, Brasilienses. *Folia terminalia et radicalia*, plicata. *Pedunculi radicales, erecti, 1-3-flori, vaginati.* Flores majusculi.

COLAX jugosus; pedunculo 2-3-floro, sepalis ovato-rotundatis albis, petalis late obovatis albis fasciis purpureis creberrime notatis, labelli villosi jugosi purpureo-fasciati lobis lateralibus parvis, intermedio semiorbiculari, columna villosa.

COLAX jugosus. *Lindl. in Bot. Reg.* 1843; *Misc. p.* 51. *Reichenb. fil. Xen. Orch. p.* 107. *t.* 41.

MAXILLARIA jugosa. *Lindl. Bot. Reg.* 1840; *Misc. p.* 51.

The genus *Colax* was established by Lindley upon certain *Maxillariæ* with less ringent flowers than the majority of the species of that genus and a peculiar caudicle, though how far such differences will hold good as generic cannot be determined, until a revision of this great and most important Order shall settle the value of the characters now so arbitrarily used for the limitation of its genera. *Colax* is, however, upheld by Reichenbach, whose authority on Orchideæ is unquestionably the highest, and who gives a very fair figure of this species in the valuable work referred to.

*Colax jugosus* is a native of Brazil, and, according to Lindley, was introduced by Messrs. Loddiges. The specimen here figured flowered in Mr. Rucker's magnificent collection at Wandsworth in May of the present year. I have followed Reichenbach in referring it to Lindley's *C. jugosus*, from whose description in the 'Botanical Register' it differs in



the petals being banded with dark purple, not speckled with crimson.

DESCR. *Pseudobulbs* elongate-ovoid, compressed, smooth and even, two to three inches long. *Leaves* from the apex and base of the pseudobulbs, lanceolate, acuminate, six to nine inches long, an inch and a half to two inches broad. *Scape* radical, clothed with imbricating, rather turgid, acute sheaths, an inch to an inch and a half long, two- to three-flowered. *Flowers* subglobose, when fully expanded two inches in diameter. *Sepals* broadly oblong, almost rounded, obtuse, pale cream-colour. *Petals* obovate-oblong, shortly unguiculate, obtuse, white, thickly studded with short, transverse, black-purple bands. *Lip* smaller than the petals, shortly unguiculate, velvety and covered with fleshy ridges, three-lobed; lateral lobes small, banded longitudinally with dark purple spots; middle lobe semicircular, streaked and splashed with dark purple. *Column* villous in front.—*J. D. H.*

---

Fig. 1. Lip. 2. Column. 3. Pollinia and caudicle:—*all magnified.*







TAB. 5662.

DRACÆNA SURCULOSA ; var. *maculata*.

*Long-shooting Dracæna ; spotted-leaved var.*

Nat. Ord. ASPARAGINEÆ.—HEXANDRIA MONOGYNIA.

*Gen. Char. (Vide supra, TAB. 5248.)*

DRACÆNA *surculosa* ; fruticosa, surculos strictos erectos squamosos e radice emittens, caulibus gracilibus dichotome ramosis paucifoliatis squamosis, cicatricibus squamarum delapsarum annulatis, foliis breviter petiolatis oblongo-lanceolatis acuminatis striato-nervosis, nervis omnibus parallelis, squamis lanceolato-subulatis membranaceis erectis, pedunculo terminali gracili erecto, bracteis minutis, floribus in corymbum laxum globosum dispositis gracile pedicellatis, pedicello basin versus articulato, perianthii tubo gracili lobis linearibus reflexis æquilongo, filamentis filiformibus.

DRACÆNA *surculosa*. Lindl. in Bot. Reg. t. 1169.

Var. *maculata* ; foliis fulvo-maculatis.

This is another of the spotted-leaved *Dracænas* that inhabit, and indeed are almost peculiar to the shores of western tropical Africa, and, with the *D. phrynoides* (Tab. nostr. 5352) and *D. bicolor* (Tab. 5248), dried specimens were sent home by Mr. Gustav Mann, whilst collector for Kew on that dangerous but prolific coast.

*D. surculosa* was discovered by the late George Don, when collector for the Horticultural Society of London in 1821, at Sierra Leone, and from the plants he sent to England the figure published in the 'Botanical Register' was made ; these however wanted the yellow spots so conspicuous in var. *maculata*, and the pedicels of its flowers are rather shorter ; in other respects the plants are identical. It is very near the *D. elliptica*, var. *maculata* (Tab. nostr. 4787), but has very different flowers and inflorescence.

*D. surculosa*, var. *maculata*, was collected by G. Mann in 1863 on the banks of the Old Calabar River, but the speci-



mens here figured were communicated by Mr. Clarke, of the Glasgow Botanic Garden, to whom the Royal Gardens are indebted for a fine living plant.

DESCR. A *shrub*, six to eight feet high, sparingly dichotomously branched, throwing up copious, stout, erect, rod-like, scaly surculi from the root. *Stems* and *branches* very slender, annulate where the scales have fallen away, terete, with deciduous subulate membranous scales here and there on the shoots and at the base of the peduncle. *Leaves* in scattered, subopposite pairs, and whorled in threes, spreading, flat, four to six inches long, one and a half to two inches broad, shortly petioled, oblong-lanceolate, acuminate, finely striated with parallel nerves, rather membranous in texture. *Peduncle* terminal, strict, erect or inclined, three to five inches long, slender, with scattered sheathing scales, bearing at the top a globose, lax corymb of greenish-white flowers. *Peduncles* one inch long, very slender, with subulate bracts at the insertion, jointed near the base. *Ovary* oblong. *Perianth*-tube above the ovary nearly half an inch long, slender; lobes linear, reflexed, obtuse, about as long as the tube, pale-yellowish. *Filament* slender, filiform, as long as the perianth lobes; *anthers* oblong, yellow. *Ovary* bluntly trigonous; *style* very slender; stigma capitate, three-lobed. *Berry* as large as a pea, one-seeded. *Seed* subglobose.—J. D. H.

---

Fig. 1. Flower. 2. Upper part of stamen. 3. Pistil. 4. Transverse section of ovary. 5. Fruit:—all but Fig. 5 magnified.







TAB. 5663.

BEGONIA VEITCHII.

*Veitch's Begonia.*

Nat. Ord. BEGONIACEÆ.—MONÆCIA POLYANDRIA.

Gen. Char. (*Vide supra*, TAB. 4131.)

BEGONIA (§ Huszia) *Veitchii*; acaulis, laxe pilosa, foliis crasse petiolatis oblique ovato- v. rotundato-cordatis lobulatis et crenulatis, nervis flabellatis subtus prominulis, scapo robusto 2-floro (fl. ♂ et ♀), bracteis 2 oblongis obtusis roseis, floribus amplis miniato-cinnabarinis, perianthii foliolis obovato-rotundatis in ♂ 4, in ♀ 5, filamentis liberis, antheris obtusis, ovario 3-loculari, placentis 2-fidis, lobis lobulatis undique ovuliferis, stylis 3-2-furcatis, cruribus fascia papillosa torta cinctis.

BEGONIA *Veitchii*. Hook. f. in Gard. Chron. 1867, p. 734, cum ic. xylog.

Of all the species of *Begonia* known, this is, I think, the finest. With the habit of *Saxifraga ciliata*, immense flowers of a vivid vermilion-cinnabar red, that no colourist can reproduce, it adds the novel feature of being hardy, in certain parts of England at any rate, if not in all. It was discovered by Messrs. Veitch's collector, Mr. Pearce, near Cuzco, in Peru, at an elevation of 12,000–12,500 feet, and the plants grown in Mr. Veitch's establishments have already given proof sufficient of their hardihood, by withstanding a temperature of 25° Fahr. with absolute impunity. Unwilling as I am to pronounce on the probable or possible adaptation of exotic plants to an English climate, I cannot but believe that in the south-western counties and in the south of Ireland, the *Begonia Veitchii* will certainly prove one of the most ornamental of border plants.

A very nearly allied species to this exists in the Hookerian Herbarium, collected by Mandon in the Andes of Bolivia, near Sorata, altitude 9,000–10,000 feet; it is, however, more caulescent, and has a glabrous scape, with larger stipules and bracts. I have mentioned this as the same species as *Veitchii*,

SEPTEMBER 1ST, 1867.



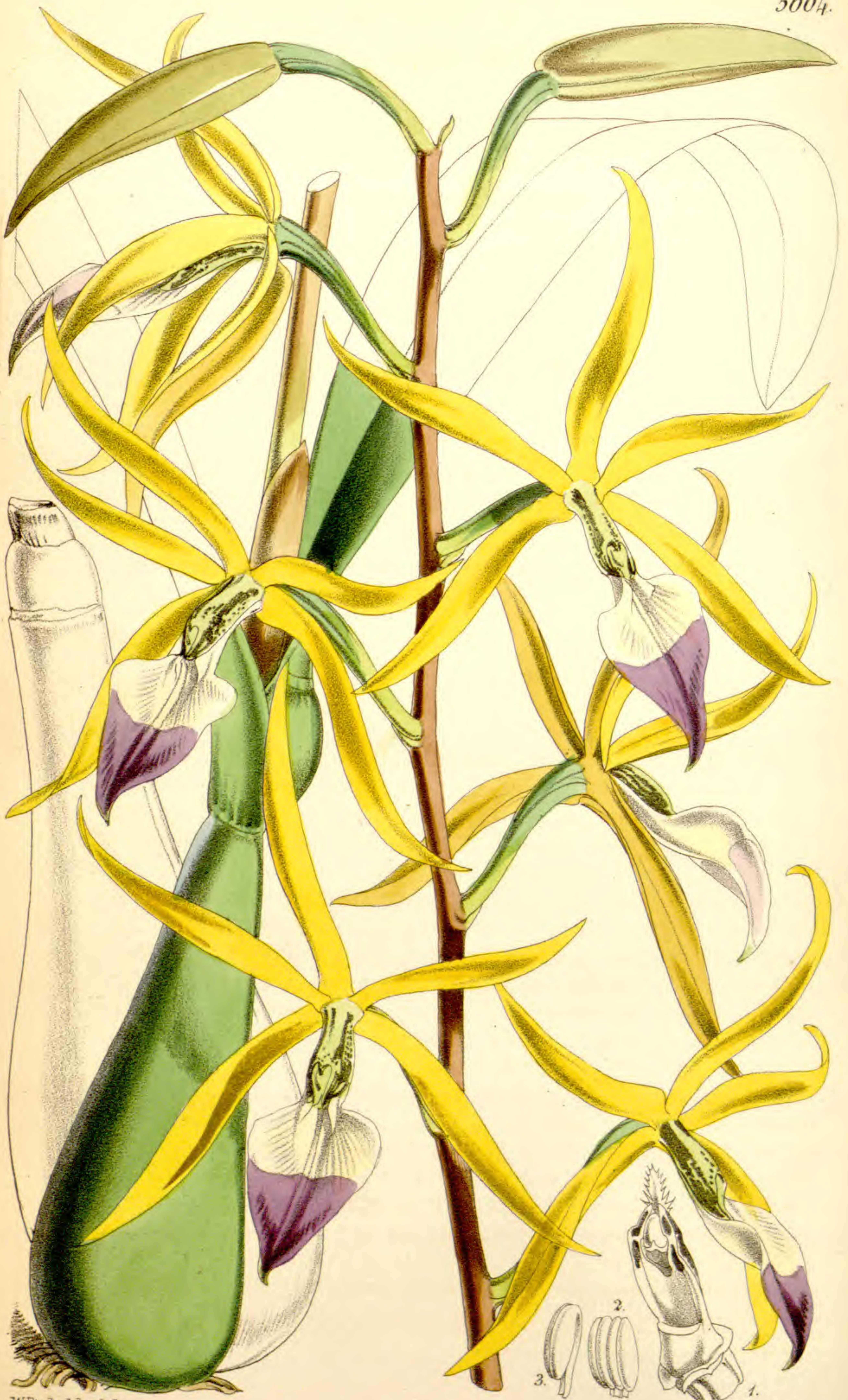
in the 'Gardeners' Chronicle,' but from live specimens since received from Major Trevor Clarke, I believe it to be distinct, having a caulescent habit, many-flowered scapes, and less brilliantly coloured flowers. It will shortly be figured in this work as *B. Clarkii*.

DESCR. *Root* tuberous. *Stem* almost none. *Leaves* nearly radical, on short, stout, pilose petioles, orbicular- or broadly ovate-cordate, concave, obscurely lobed and crenate, four to six inches in diameter, thick in texture; nerves radiating from the centre, very prominent below; upper surface dark-green, under very pale; margins red and ciliate. *Stipules* membranous, triangular, ovate, red. *Scape* erect, stout, terete, eight to ten inches high, pilose, two-flowered, male and female. *Bracts* concave, membranous, oblong, obtuse, ciliate, rose-red. *Peduncles* about one inch long. *Flowers* one and three-quarters to two and a half inches in diameter, bright cinnabar-red; *male* flower largest; perianth segments four, broadly ovate; *stamens* very numerous, crowded on a slightly elevated torus; filaments filiform; *anther* broadly obovate, obtuse; *female* flower, perianth segments five, as in the male flower. *Ovary* green, obcuneate, unequally three-winged; *style* trifid, lobes bifid, with spiral stigmatic bands; *placenta* bifid and lobed, the lobes ovuliferous all over.—  
J. D. H.

---

Fig. 1. Ovary and style and stigmas. 2. Transverse section of ovary.  
3. Stamen:—all magnified.







TAB. 5664.

EPIDENDRUM BRASSAVOLÆ.

*Brassavola-like Epidendrum.*

Nat. Ord. ORCHIDÆ.—GYNANDRIA MONANDRIA.

Gen. Char. (*Vide supra*, TAB. 4107.)

EPIDENDRUM *Brassavolæ*; pseudobulbis semifusiformibus compressis diphyllis, foliis oblongis acutis racemo multifloro 2-3-plo brevioribus, sepalis petalisque subæqualibus lineari-lanceolatis acuminatis, labello longè cuneato oblongo acuminato lineis tribus per discum carinato, androclinii dentibus lateralibus triangulo-semilunatis extus medio unidentatis, denti medio spathulato sursum serrulato. *Rchb.*

EPIDENDRUM *Brassavolæ*. *Rchb. in Bot. Zeitung*, 1852, p. 738; et in *Beitr. Orchid. Flora Cent. Amer.* p. 36. *Lindl. Folia. Bateman in Gard. Chron.* (1867), p. 682.

This very distinct *Epidendrum* was discovered by the late Mr. Skinner on the mountains of Guatemala, and he it was who gave me (in 1865) the plant from which the accompanying figure was obtained. Professor Reichenbach had previously examined wild specimens of the same thing, gathered on the volcano of Chiriqui, and these suggested to him the very appropriate name of *Brassavolæ*, under which he described it several years ago in a German periodical. But, although long known to botanists, I am not aware of the species having ever flowered in England before the present summer, when a spike made its appearance in the Mexican house at Biddulph Grange, in which the quaint form and singular colour of its blossoms attracted much attention. It grows freely, and will, no doubt, prove to be a popular favourite, especially when it has become strong enough to produce such copious heads of bloom as those that are preserved in the herbaria. The flowers continue a long time in beauty, and, though scentless by day, are agreeably fragrant by night. It is most nearly allied to *E. prismatocarpum*, but is a far handsomer plant; nor does it require so much heat as that species.

SEPTEMBER 1ST, 1867.



DESCR. *Pseudobulbs* compressed, somewhat fusiform, a span long, bearing two leaves. *Leaves* oblong, acute, much shorter than the *raceme*, which is many-flowered, and sometimes attains the height of from two to three feet. *Flowers* nearly four inches across, arranged in a raceme proceeding from a short pointed spathe. *Bracts* triangular, much shorter than the ovaries. *Sepals* and *petals* nearly equal, spread wide open, about two inches long, linear-lanceolate, acuminate, of a rich yellowish-brown. *Lip* not quite so long as the petals, oblong, wedge-shaped at the base, acuminate at the apex, where it is tipped with a patch of lovely mauve, the other portions being straw-colour; along its disk run two or three carinate lines. *Column* three-toothed, the side teeth being triangular and semilunate, while that in front is spatulate and serrulate.—*J. B.*

---

Fig. 1. Column. 2 and 3. Pollen-masses:—*magnified*.







ERODIUM MACRADENIUM.

*Spotted-flowered Storksbill.*

Nat. Ord. GERANIACEÆ.—MONADELPHIA PENTANDRIA.

*Gen. Char.* Flores regulares v. vix irregulares. *Sepala* 5, imbricata. *Petala* 5, imbricata. *Glandulæ* 5, petalis alternæ. *Stamina* 5, cum staminodiis totidem anantheris alternata et basi cum iis in tubum connata. *Ovarium* 5-lobum, 5-loculare, rostratum, rostro in stylum abeunte, ramis 5 longitudinaliter stigmatosis; ovula in loculis 2, superposita. *Capsula* 5-loba; lobi 1-spermi, ab axi placentifero septifrage dehiscentes, caudis a basi ad apicem elastice revolutis. *Semina* exalbuminosa, cotyledonibus plicatis v. flexuosis.—Herbæ, *rarius* suffrutices, *ramis sæpe articulato-nodosis*. Folia *opposita*, *altero sæpe minore*, v. *alterna*, *dentata lobata* v. *dissecta*. Stipulæ *membranaceæ*. Pedunculi *axillares*. Flores *sæpius umbellati*, *rarius solitarii* v. *2-ni*.

ERODIUM *macradenium*; acaule, foliis petiolatis ambitu oblongis pinnatisectis pubescenti-glandulosis, segmentis pinnatifidis, rachi dentata, pedunculis umbelliferis, involucris foliolis lanceolatis v. ovatis acuminatis, sepalis anguste oblongis longe mucronatis, petalis obovatis, 2 superioribus paulo minoribus plaga lata purpurea notatis, seminibus estriatis.

ERODIUM *macradenium*. L'hérit. *Géran.* t. 1. Gren. et Godr. *Fl. France*, v. 1. p. 313.

ERODIUM *graveolens*. Lapeyr. *Hist. Pl. Pyrén. abrégée*, p. 390.

ERODIUM *glandulosum*. Willd. *Sp. Pl.* v. 3. p. 628. DC. *Prodr.* v. 1. p. 645.

GERANIUM *glandulosum*. Cav. *Diss.* v. 5. t. 125. f. 2.

GERANIUM *radicatum*. Lapeyr. *Fl. Pyrén.* v. 1. t. 1.

There can be little doubt but this charming hardy perennial plant is the very rare *Erodium macradenium*, L'hérit., though it does not agree with the author's character in having acute petals, nor with the descriptions of Willdenow and Lapeyrouse, who describe the two spotted petals as larger than the others; nor with Willdenow's observation that the involucral leaves are linear-lanceolate. Still, the habit and all other characters, including the colour of the flower, agree so precisely with those of *E. macradenium*, that it is im-



possible to separate it specifically by the slight and probably variable differences above noted.

*E. macradenium* is a native of the Pyrenees, where it was discovered by Lapeyrouse in 1782, who describes it as being remarkable for the extraordinary length and peculiar form of the roots, and strong, acrid, penetrating odour of the foliage. The specimens figured were received from Messrs. Backhouse, to whom we are also indebted for living plants now flowering in the Royal Gardens.

DESCR. *Root* very large, stout, long, tortuous amongst rocks, crowned with the ragged bases of the old leaves. *Stem* scarcely any. *Leaves* crowded near the top of the root, spreading, on long petioles, hairy and glandular, one and a half to two inches long, oblong in outline, pinnate, the segments linear-oblong, pinnatifid; rachis with a toothed wing. *Peduncles* longer than the leaves, ascending. *Flowers* umbellate, three-quarters of an inch in diameter. *Involucral leaves* ovate or lanceolate, acuminate. *Sepals* oblong-linear, with a long, subterminal mucro. *Petals* longer than the sepals, obovate; two upper purple, with a deep black-purple horse-shoe spot, and purple veins; three lower pale purple.—*J. D. H.*

---

Fig. 1. Calyx and pistil :—*magnified*.







GRIFFINIA BLUMENAVIA.

*Dr. Blumenau's Griffinia.*

Nat. Ord. AMARYLLIDÆ.—HEXANDRIA MONOGYNIA.

*Gen. Char.* *Perianthium* corollinum, superum, tubo brevi cylindrico, limbo inæquali sub-2-labiato 6-partito, lobo inferiore porrecto. *Stamina* 6, summo tubo inserta, filamentis filiformibus, declinatis v. uno assurgente, reliquis declinatis; *antheræ* versatiles. *Ovarium* inferum, 3-loculare; *stylus* 3-sulcus, *stigmatē* indiviso 3-fido v. 3-lobo; *ovula* in loculis 2, collateralia. *Capsula* membranacea, 3-sulca, 3-locularis. *Semina* in loculis subsolitaria, obovata, erecta, testa ochroleuca nitida; *embryo* axilis.—*Herbæ* Brasilienses, *bulbo radicali tunicato*. *Folia* pauca, *petiolata*, *oblonga*, *costato-nervosa*. *Scapus subcylindricus, solidus*. *Flores umbellati, spatha 2-valvi arida*.

GRIFFINIA *Blumenavia*; foliis subgraciliter petiolatis oblongo-lanceolatis, floribus 3 unc. diam., perianthii foliolis oblongo-lanceolatis obtusis albis, 5 superioribus roseo-venosis, superiore latiore, inferiore angustiore, stigmatē 3-fido, lobis acutiusculis recurvis.

GRIFFINIA *Blumenavia*. Koch et Bouché ex Carrière, in *Rev. Horticole*, 1867, p. 32, cum iconē pessima.

A very charming tropical bulbous plant, discovered by Dr. Blumenau at St. Catherine's, Brazil, and sent by him to the Berlin Botanic Gardens. It is advertised by Messrs. Haage and Schmidt in their catalogue for 1867, and the Royal Gardens, Kew, are indebted to Messrs. E. G. Henderson and Son for specimens which flowered in April of the present year. The figure in the 'Revue Horticole' is so bad, that it would have been impossible to have recognized the species by it, and as it is, I am indebted to Messrs. Haage and Schmidt for the verification of the plant.

The genus *Griffinia* seems to be very closely allied to *Amaryllis*, differing conspicuously in the persistent leaves. Endlicher describes it as having a stamen ascending, which we do not observe in this plant. Herbert, again (on 'Bulbous Plants,' p. 228), implies that all are declinate. Endlicher says the stigma is undivided or obsoletely three-lobed, whereas in *G. Blumenavia* it is three-cleft.



DESCR. *Bulb* as large as a wild hyacinth, covered with brown scales. *Leaves* numerous, four to five inches long, on rather slender petioles, oblong-lanceolate, acuminate, obscurely nerved in a young state, as figured, ribbed and marked with transverse veins when old. *Scape* erect, six to eight inches long, terete, solid. *Umbel* six- to eight-flowered; spathes membranous. *Peduncles* one inch long. *Perianth* white, three inches in diameter; segments oblong-lanceolate, obtuse, all but the lowest traversed with fine, broad, pale rose-coloured veins; uppermost broadest, lowermost narrowest and pointed. *Filaments* slender, all declinate; *anthers* yellow. *Stigma* trifid, lobes acute.—*J. D. H.*

---

Fig. 1. Pistil. 2. Transverse section of ovary :—*both magnified.*



## NEW SERIES OF NATURAL HISTORY FOR BEGINNERS.

*Now Ready.*

- BRITISH BUTTERFLIES AND MOTHS**; an Introduction to the Study of the LEPIDOPTERA of Britain. By H. T. STAINTON. Crown 8vo, 16 Coloured Steel Plates, and Wood-Engravings, 10s. 6d.
- BRITISH GRASSES**; an Introduction to the Study of the Grasses found in the British Isles. By M. PLUES. Crown 8vo, 16 Coloured Plates, and 100 Wood-Engravings, 10s. 6d.
- BRITISH BEETLES**; an Introduction to the Study of our Indigenous COLEOPTERA. By E. C. RYE. Crown 8vo, 16 Coloured Steel Plates, and Wood-Engravings, 10s. 6d.
- BRITISH BEES**; an Introduction to the Study of our Natural History and Economy of the Bees indigenous to the British Isles. By W. E. SHUCKARD. Crown 8vo, 16 Coloured Steel Plates, and Woodcuts, 10s. 6d.
- BRITISH SPIDERS**; an Introduction to the Study of the ARANEIDÆ found in Great Britain and Ireland. By E. F. STAVELEY. Crown 8vo, 16 Coloured Plates, and 44 Wood-Engravings, 10s. 6d.
- BRITISH FERNS**; an Introduction to the Study of the FERNS, LYCOPODS, and EQUISETA indigenous to the British Isles. With Chapters on the Structure, Propagation, Cultivation, Diseases, Uses, Preservation, and Distribution of Ferns. By M. PLUES. Crown 8vo, 16 Coloured Plates, and 55 Wood-Engravings, 10s. 6d.
- BRITISH SEAWEEDS**; an Introduction to the Study of the Marine ALGÆ of Britain. By S. O. GRAY. Crown 8vo, 16 Coloured Plates, 10s. 6d. [Nearly ready.]

*Just Published.*

- A SECOND CENTURY OF ORCHIDACEOUS PLANTS**, selected from the subjects published in Curtis's 'Botanical Magazine' since the issue of the 'First Century.' Edited by JAMES BATEMAN, Esq., F.R.S. Royal 4to. Parts I. to IX., each with 10 Coloured Plates, 10s. 6d., now ready. To be completed in 10 parts.
- MONOGRAPH OF ODONTOGLOSSUM**, a Genus of the Vandeous Section of Orchidaceous Plants. By JAMES BATEMAN, Esq., F.R.S. Imperial folio. Parts I. to IV., each with 5 Coloured Plates, and occasional Wood Engravings, 21s.
- HANDBOOK OF THE BRITISH FLORA**; a Description of the Flowering Plants and Ferns indigenous to, or naturalized in, the British Isles. For the Use of Beginners and Amateurs. By G. BENTHAM, F.R.S. *New Edition.* Crown 8vo, 12s.
- THE ILLUSTRATED BRITISH FLORA**; a Description (with a Wood-Engraving, including dissections of each species) of the Flowering Plants and Ferns indigenous to, or naturalized in, the British Isles. By G. BENTHAM, F.R.S. Demy 8vo, 2 vols., 1295 Wood-Engravings. £3. 10s.
- HANDBOOK OF THE NEW ZEALAND FLORA**; a Systematic Description of the Native Plants of New Zealand, and the Chatham, Kermadec's, Lord Auckland's, Campbell's, and Macquarrie's Islands. By Dr. J. D. HOOKER, F.R.S. Demy 8vo. Part I., 16s.; Part II., 14s.; or complete in one vol. 30s. Published under the auspices of the Government of that Colony.
- FLORA AUSTRALIENSIS**; a Description of the Plants of the Australian Territory. By G. BENTHAM, F.R.S., assisted by F. MUELLER, F.R.S. Demy 8vo. Vol. I., II., and III., 20s. each. Published under the auspices of the several Governments of Australia.
- THE EDIBLE MOLLUSKS OF GREAT BRITAIN AND IRELAND**, with Recipes for cooking them. By M. S. LOVELL. Crown 8vo, 12 Coloured Plates, 8s. 6d.
- SUNSHINE AND SHOWERS**; their Influencees throughout Creation. A Compendium of Popular Meteorology, Curiosities of the Weather, and Weather Wisdom. By ANDREW STEINMETZ, Esq. Crown 8vo, Cuts, 7s. 6d.
- "The book is a well-written one, and contains such a variety of interesting information that its possession is desirable, even though the purchaser may have no intention of setting up as a weather prophet. Some of the very latest discoveries, both in science and the useful arts, will be found treated on in a way that is quite the reverse of the ordinary dryness and dulness of a scientific treatise."—*United Service Magazine.*
- THE REASONING POWER IN ANIMALS.** By the Rev. J. S. WATSON. Crown 8vo, 9s.
- "Full of entertainment, of instruction, and of matter suggestive of thought on that strange world of utterly mysterious life with which we come into daily contact, but of the essence of which we know scarcely anything."—*Daily News.*
- METEORS, AEROLITES, AND FALLING STARS.** By Dr. T. L. PHIPSON. Crown 8vo, Woodcuts and Lithographie Frontispiece, 6s.
- "Well calculated to repay perusal. Dr. Phipson has brought together, in a condensed, but by no means a dry form, a great number of interesting facts, and a large amount of reasoning which carries with it, in most cases, the conviction that his views are correct."—*Scientific Review.*



# HEATING BY HOT WATER.

---

It is now generally admitted that Buildings of any kind can be more effectually warmed by Hot Water than by any other means ; but as so much depends on the way in which the Apparatus is fixed, it is of the greatest importance that it be done by experienced men.

J. JONES & SONS are prepared to estimate for Warming, to any extent—

GREENHOUSES.  
CONSERVATORIES.  
VINERIES.  
HOTHOUSES.  
FORCING PITS.  
PEACH HOUSES.  
PINE STOVES.  
ORCHARD HOUSES.

CHURCHES.  
CHAPELS.  
SCHOOLS.  
READING ROOMS.  
LECTURE ROOMS.  
BILLIARD ROOMS.  
HALLS AND PASSAGES.  
BATHS.

FACTORIES.  
OFFICES.  
WORKSHOPS.  
WAREHOUSES.  
DRYING ROOMS.  
CELLARS.  
COACH-HOUSES.  
HARNESS ROOMS.

J. JONES & SONS' Apparatus is simple in construction, moderate in cost, and economical in working.

It is equally available for the Amateur's Greenhouse, or the longest range of Forcing Houses ; for the smallest Chapel or the largest Church ; for Private Offices, or those of Public Companies.

It is admirably adapted for Dwelling Houses, as coils of pipes can be placed in any part, for warming the various rooms. One or more Baths may be heated from the same boiler, and a constant supply of hot water obtained in any part of the house.

For Warehouses and Workshops this system of heating is unsurpassed, as it is not only the means of keeping goods dry, but it also adds to the comfort of the workpeople, and thereby effects a saving in labour.

J. JONES & SONS recommend boilers of all kinds being set in brickwork, if possible ; but portable boilers can be supplied, if required.

---

**MATERIALS.**—All Materials supplied will be of the best quality.

**DELIVERY.**—Boilers of various kinds, and pipes and connections, being always in stock, can, at a very short notice, be sent to any part.

**FIXING.**—The Fixing will be done by experienced men, fully capable of finishing properly any work they may undertake ; and J. JONES & SONS are prepared to guarantee the effectual working of any apparatus fixed by their own men.

**ESTIMATES.**—Plans and Estimates will be sent on application.

---

**J. JONES & SONS,**

**IRON MERCHANTS AND HORTICULTURAL ENGINEERS,**

**6, BANKSIDE, SOUTHWARK, LONDON, S.E.**



Third Series.

No. 274.

VOL. XXIII. OCTOBER.

[Price 3s. 6d. col<sup>d</sup>. 2s. 6d. plain.]

OR No. 969 OF THE ENTIRE WORK.

CURTIS'S  
BOTANICAL MAGAZINE,

COMPRISING

THE PLANTS OF THE ROYAL GARDENS OF KEW,  
AND OF OTHER BOTANICAL ESTABLISHMENTS IN GREAT BRITAIN,  
WITH SUITABLE DESCRIPTIONS;

BY

JOSEPH DALTON HOOKER, M.D., F.R.S. L.S. & G.S.,  
Director of the Royal Botanic Gardens of Kew.



~~~~~  
Nature and Art to adorn the page combine,  
And flowers exotic grace our northern clime.  
~~~~~

LONDON:

L. REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

1867.



# MR. HARDWICKE'S PUBLICATIONS.

THE POPULAR SCIENCE REVIEW, No. XXV., for October, Price 2s. 6d., contains:

The Microscope in Geology. By D. FORBES, F.R.S. *Illustrated.*  
 Why the Leaves Fall. By M. T. MASTERS, M.D., F.L.S.  
 A Message from the Stars. By ROBERT HUNT, F.R.S.  
 On the Planariæ of our Ponds and Streams. By E. RAY LANKESTER. *Illustrated.*  
 Physics of the Brain. By B. W. RICHARDSON, M.A., M.D., F.R.S.  
 Ventilation and Ventilators. By Dr. LAWSON. *Illustrated.*  
 Reviews of Books.  
 Summary of Scientific Progress.

POPULAR SCIENCE REVIEW. Completion of Vol. VI. The Sixth Volume will be ready October 5th, in cloth, price 12s., containing Articles on topics of current interest by the best Scientific Writers of the day. Complete Sets may still be had, price, in numbers, £3. 2s. 6d.; Six Vols., cloth, price £3. 14s. 6d.; or in half-morocco, for the Library, price £4. 12s. 6d.

SOWERBY'S ENGLISH BOTANY, No. 54, Price 5s., is now ready.

SOWERBY'S ENGLISH BOTANY. Volume VII. contains all the

Horehounds	Woundworts	Alkanets	Loose-strifes
Mints	Hemp-nettles	Comfreys	Pimpernels
Thymes	Dead-nettles	Hounds'-tongues	Thriffs
Pennyroyals	Bugles	Butterworts	Sea-lavenders
Marjorams	Germanders	Bladderworts	Plantains
Calamints	Buglosses	Oxlips	Rib-grasses
Clarys	Lungworts	Primroses	Rupture-worts
Balms	Gromwells	Ivy-leaved Cyclamens	Knawels.
Skullcaps	Forget-me-nots		

Seven Parts at 5s.; complete, in cloth, 38s.; half-morocco, 42s.; whole morocco, 48s. 6d.

HARDWICKE'S SCIENCE GOSSIP, No. 34, October. Price 4d. An Illustrated Medium of Interchange and Correspondence for Students and Lovers of Nature. A never-failing source of ready and pleasant chat in the drawing-room or parlour. Illustrated with many Cuts. The Volumes for 1865 and 1866, price 5s. each.

To Naturalists, Microscopists, and Field Clubs.

Fcap. 8vo, cloth, 114 Illustrations, price 2s. 6d.,

THE COLLECTOR'S HANDY-BOOK of ALGÆ, DIATOMS, DESMIDS, FUNGI, LICHENS, MOSSES, etc.; with Instructions for their Preparation and the Formation of an Herbarium. Edited by the Rev. W. W. SPICER, M.A. CONTENTS:—Algæ generally; Diatomaceæ; Free Diatomaceæ; Stipitate Diatomaceæ; Characteristics of Diatomaceæ; Desmidiaceæ, and similar minute Algæ; Filamentous Algæ; Oscillatoria; Gelatinous, Crustaceous, and Stone-like Algæ; Marine Algæ; Characeæ; Fungi; Lichens; Mosses and their Allies; Ferns and Flowering Plants; The Herbarium.

MUSHROOMS AND TOADSTOOLS. How to distinguish easily the Differences between Edible and Poisonous Fungi, with Two Large Sheets, containing Figures of Twenty-nine Edible and Thirty-one Poisonous Species. Drawn the natural size, and coloured from living specimens. WORTHINGTON G. SMITH, F.A.S.L., etc. In sheets, with Book, price 6s.; on canvas, in cloth case for pocket, price 10s. 6d.; on canvas, with rollers and varnished, for hanging up, 10s. 6d.

LONDON: ROBERT HARDWICKE, 192, PICCADILLY, W.







TAB. 5667.

LÆLIA MAJALIS.

*May-flowering Lælia.*

Nat. Ord. ORCHIDÆ.—GYNANDRIA MONANDRIA.

*Gen. Char. (Vide supra, TAB. 158.)*

LÆLIA *majalis*; pseudobulbis ovatis vel subrotundis, foliis solitariis coriaceis oblongis, spicis 1- vel rarissime 2-floris subæqualibus, bracteis membranaceis ovatis, sepalis lanceolatis petalis oblongo-lanceolatis duplo latioribus, labelli lobo medio rotundato emarginato plano, lateralibus parvis obtusis. *Lindl.*

LÆLIA *majalis*. *Bateman, Orchid. Mex. et Guat. t. 23. Bot. Reg. v. 30. t. 30. Paxton, Mag. v. 12. p. 1.*

BLETIA *speciosa*. *Hb. Bonpl. et Kunth, Nov. Gen. et Spec. v. 1. p. 342. Rehb. in Walpers' Ann. v. 6.*

BLETIA *grandiflora*. *La Llave.*

This magnificent Mexican Orchid has long been known to botanists. Hernandez was the first to notice it, and he gives it a place by the side of the glorious *Tigridia pavonia* and a *Stanhopea* (probably *S. Martiana*) in the singular frontispiece that he prefixed to his work on the natural history of New Spain, published about two hundred years ago. Early in the present century it caught the eye of Humboldt himself, by whom, or rather by his collaborateur Kunth, it was described under the name of *Bletia speciosa*. Lexarza, the companion of La Llave, subsequently found it growing over the whole province of Mechoacan, but failing to identify it with Humboldt's plant, published it under the designation of *B. grandiflora*. Later still, when it flowered in Mr. Llewelyn's collection at Penllargare, Dr. Lindley, supposing it to be a new *Lælia*, gave it the name of *L. majalis*, which is merely a Latin rendering of the vernacular name, "Flor de Mayo," by which the species is known over nearly the whole of Mexico, and which of course indicates the usual period of its blossoming; and although the latter name has, as regards priority, no right to stand, still, as it has been accepted over all Europe, it would scarcely be desirable, even if it were possible to disturb it.

OCTOBER 1ST, 1867.



This *Lælia* is no stranger, having been introduced for thirty years at least, and I well remember being present at the unpacking of a quantity of it that had been brought over on speculation in 1837 by a M. Deschamps, who was much surprised to discover that because a few plants of the species had been sold for several guineas a-piece, a cargo of many hundreds could not find purchasers at the same rate. But however numerous the specimens, none of them survived for more than a few years, as was the case with a subsequent importation of the same thing by the Horticultural Society. In two or three instances, indeed, flowers were produced, but they gave a very inadequate notion of the beauty of the plant which was not likely to succeed permanently under other than cool treatment. It was reserved for Mr. Anderson, gardener to Mr. Dawson of Meadow Bank near Glasgow, to produce flowering specimens fully equal to those that the plant sends forth in such rich profusion in its native haunts, and which, exhibited at South Kensington in the beginning of June last, excited much astonishment and admiration. One of these is represented on the opposite side, and its beauty is not in the slightest degree exaggerated in Mr. Fitch's drawing, excepting that *two* flowers are shown on a spike as sometimes, though rarely, occurs in the wild specimens; in cultivation it has hitherto produced only solitary flowers, but these were more than a span across.

Mr. Anderson's plants are accustomed to a rather close and warm temperature during the day in summer, but at night are kept as cool as possible, while in winter they are allowed a decided rest. I apprehend, however, that a cool airy and rather dry temperature,—an imitation, in short, of the Mexican climate,—will be found at least equally efficacious; at all events, in such a climate my own plants are thriving beautifully, being suspended near the glass on branch orchid-pots.

DESCR. *Pseudobulbs* ovate or subrotund, two inches high, and bearing solitary, leathery, oblong *leaves*, which are about the length of the *flowers*, *i. e.* fully a span across. *Bracts* membranaceous, ovate. *Spikes* short, issuing from apex of the bulb, one- or (very rarely) two-flowered. *Sepals* lanceolate. *Petals* oblong-lanceolate, twice the width of the sepals, and like them of a beautiful rosy-lilac. *Lip* three-lobed, the middle lobe emarginate, rounded, its edges lilac, and its centre white with lilac streaks, the side lobes small, white inside, with lilac streaks.—*J. Bateman.*





W. Fitch, del. et lith.

Vincent Brooks, Imp.

= *Freziera stellata* Schult.



TAB. 5668.

ÆCHMEA GLOMERATA.

*Crowded-flowered Æchmea.*

Nat. Ord. BROMELIACEÆ.—HEXANDRIA MONOGYNIA.

Gen. Char. (*Vide supra*, TAB. 5447.)

ÆCHMEA *glomerata*; foliis e basi amplexantibus sensim dilatatis late lineari- v. oblongo-ligulatis cuspidatis 3-4 poll. latis viridibus, margine spinulis remotiusculis brevibus nigris inferioribus crebrioribus recurvis ornato, scapo erecto folio longiore ramoso viridi-roseo picto, ramis brevibus undique floriferis, floribus bracteatis dense glomeratis, bracteis basi ovatis dein subulatis sepalisque erectis imbricatis sanguineis pungentibus, petalis violaceis acuminatis, ungue apice 2-squamato, filamentis filiformibus.

PIVONNEAVA *glomerata*. *Gaud. Voy. Bonite*, t. 63.

HOPLOPHYTUM *augustum*, *partim*. *Beer, Die Familie der Bromeliaceen*, p. 136.

A native of the province of Bahia, in Brazil, from whence living specimens were sent in 1863 by C. Williams, Esq., of that city, which flowered in the Palm House of the Royal Gardens in March of the present year. It is a most beautiful plant, easy of cultivation, and is very effective at a season when the tropical houses are rather deficient in conspicuous plants.

This species is exceedingly well figured in the 'Botany of the Voyage of the French Frigate Bonite,' a work which is unfortunately unaccompanied by descriptive matter; it there bears the generic name of *Pivonneava*, which is probably synonymous with Beer's *Hoplophytum*, founded on a group of *Æchmeas* with rigid spinescent foliage, branched inflorescence, an ovoid ovary crowned with the subulate calyx-teeth, an almost closed perianth, and erect petals.

Beer, in the above-quoted work, confounds this with the *H. augustum* (*Tillandsia augusta*, Arrab. Fl. Flum. t. 135), a plant with woolly inflorescence, and much smaller flowers, according to the figure.

OCTOBER 1ST, 1867.



DESCR. Quite glabrous. *Stem* simple, or branched at the base only. *Leaves* spreading on all sides, one to two and a half feet long, four to six inches broad, linear oblong, rounded at the apex, with a cuspidate point; beset along the margin with short, rather distant, black spines, those on the lower part recurved and closer-set, dull green, not glaucous nor shining, nerveless, concave below, not thick in texture. *Scape* stout, erect, six to eight inches high, bearing a brilliantly coloured blood-red branched panicle, of large bracts studded with small violet flowers; rachis green, tinged with red; floriferous branches short, thick, forming with the dense bracts broadly ovoid masses. *Bracts* rather longer than the flowers, subsquarrose, ovate, with long subulate pungent apices. *Calyx-lobes* ovate, acuminate, pungent. *Petals* twice as long, violet; blade linear-oblong, with recurved acuminate apex, the claw with two scales at the junction with the blade. *Filaments* filiform; *anthers* linear. *Stigma* subclavate, with a twisted apex.—*J. D. H.*

---

Fig. 1. Flower. 2. Petal and stamens. 3. Ovary, style, and stigma:—*all magnified.*







RONDELETIA PURDIEI.

*Mr. Purdie's Rondeletia.*

Nat. Ord. RUBIACEÆ.—PENTANDRIA MONOGYNIA.

*Gen. Char.* Calycis tubus subglobosus; limbus 4-5-partitus, lobis oblongis linearibusve acutis persistentibus. Corollæ tubus cylindricus, limbo patenti 4-5-fido, lobis subrotundatis. Stamina 4-5; antheræ fauce calycis insertæ, sessiles, inclusæ. Discus tumidus. Ovarium 2-loculare; stylus filiformis, stigmatibus 2-fido; ovula numerosa, placentis septo adnatis affixa. Capsula globosa, calycis limbo coronata, 2-locularis, ab apice ad basin loculicide v. septicide in valvas 2 apice fissis dehiscens, polysperma. Semina minima, angulata, 2 v. plura perfecta.—Frutices v. arbusculæ Americæ tropicæ incolæ. Folia sessilia v. petiolata. Stipulæ interpetiolares, deltoideæ v. lineari-lanceolatæ. Flores inter minores, in pedunculos axillares 3-chotomos paniculasve sæpe multifloras terminales dispositi.

RONDELETIA *Purdiei*; ramulis et inflorescentia subsericeo-puberulis, foliis ovato-oblongis obtusiusculis in petiolum brevem angustatis v. basi contracta cordata utrinque glaberrimis v. subtus ad nervos puberulis, nervis plurimis, stipulis deltoideis, floribus in corymbos terminales densifloros 3-chotome ramosos dispositis 4-5-meris flavis, calycis lobis subulato-lanceolatis tubo subæquilongis, corollæ flavæ lobis glabris, fauce annulo tumido 5-lobo aucto.

A very charming and fragrant hothouse shrub, a native of various parts of Venezuela and New Granada, and introduced into the Royal Gardens, upwards of twenty years ago, by Mr. Purdie, an eminent collector for the establishment, who was afterwards Curator of the Botanic Garden at Trinidad. Mr. Purdie sent it from the province of St. Martha, where it has been also collected by Goudot and by Schlim (n. 17 and 926), and the same plant has been found in Venezuela by Fendler (n. 586).

As a species it is well marked by the obtuse leaves, which are suddenly contracted to a narrow base, their numerous oblique veins, and the large corymbs of yellow flowers; the mouth of whose corolla is surrounded by a thickened ring. It is a free flowerer, and very fragrant.

OCTOBER 1ST, 1867.

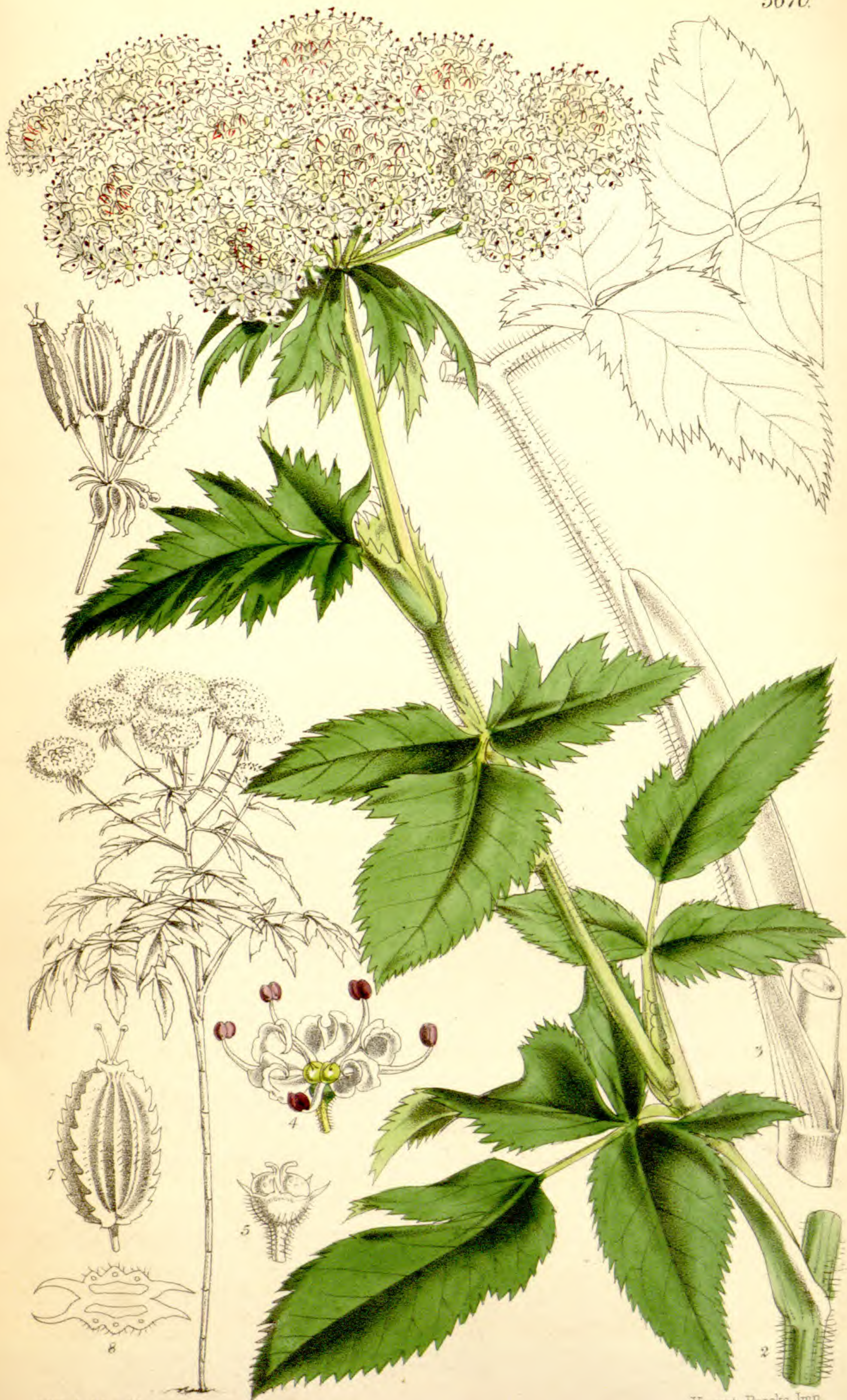


DESCR. A slender *shrub*, with almost silky pubescent branchlets and inflorescence. *Leaves* three to eight inches long, ovate-oblong or almost oblong-lanceolate but obtuse, narrowed at the base into the very short petiole, or suddenly (in the larger lower leaves) terminating in a small cordate base, glabrous and deep green above, with a red midrib; pale and usually glabrous below, with many (sometimes ten to fourteen) oblique nerves on each side the costa. *Stipules* triangular, silky-pubescent. *Flowers* small, half an inch long, crowded in terminal and axillary rounded corymbs, pale yellow, fragrant. *Calyx-lobes* as long as the tube, subulate-lanceolate. *Corolla* with a thickened ring at the throat.—*J. D. H.*

---

Fig. 1. Flower:—*magnified*.







THAPSIA DECIPIENS.

*Madeiran Thapsia.*

Nat. Ord. UMBELLIFERÆ.--PENTANDRIA DIGYNIA.

*Gen. Char.* Calycis dentes inconspicui. Petala cuneato-obovata, apice inflexa, integra v. ob costam impressam 2-fida. Discus depressus v. explanatus, stylopodiis variis. Fructus oblongus, a dorso compressus, carpellis dorso leviter convexis 2-alatis; juga primaria filiformia, æqualia, obtusa, lateralialia inter alas juxta commissuram sita, secundaria dorsalia primariis conformia, lateralialia in alas latas cum plaga commissurali continuas expansa; vittæ sub jugis secundariis v. omnibus solitariae. Carpophorum 2-partitum. Semen complanatum.—Herbæ Mediterraneæ et Madeirenses, perennes v. biennes, sæpius elatæ, caudice nunc valde elongato frutescentes. Folia pinnatim decomposita, segmentis inciso-pinnatifidis. Umbellæ compositæ, multiradiatæ. Involucrum sæpius 0; involucellorum bractæ paucae parvæ v. 0. Flores flavicantes, sordide albi v. purpurascens.

THAPSIA *decipiens*; caule nudo erecto gracili simplici annulato apice folioso, foliis 2-3-pinnatisectis, segmentis ovatis ovato-lanceolatisve inciso-serratis nunc lobulatis, petiolis rachi costaque subtus tomentosis, umbellis in paniculas elatas ramosas dispositis pubescentibus, involucri foliolis 10-12 oblongis inciso-serratis v. pinnatisectis, carpellorum alis serratis.

SELINUM *decipiens*. Schrad. et Wendl. Sert. Ham. v. 3. p. 23. t. 13.

MELANOSELINUM *decipiens*. Hoffm. Umb. ed. 2. v. 1. p. 156, ex DC. Prodr. v. 4. p. 208. Lowe, Manual of Flora of Madeira, p. 362.

This is one of the most remarkable Umbelliferous plants in cultivation, and though of little beauty as regards inflorescence, is in habit and foliage an extremely elegant and graceful plant. Unlike its congener, it has a slender, erect, annulate, palm-like stem, two to four or even six feet high, and half to one inch in diameter, bearing at the top a splendid waving crown, three to four feet across, of two to three pinnatisect leaves. It is a native of rocky gorges in the island of Madeira, where it was first brought to light, in 1829, by the Rev. R. T. Lowe, M.A., the distinguished investigator of the natural history of the Madeira, Canarian,



and Cape de Verde Islands. Curiously enough, however, it had been for many years previously in cultivation under the name of *Bubon Galbanum* (a totally different and Persian plant), owing to which mistake De Candolle gave it the specific name of *decipiens*.

The Rev. Mr. Lowe describes the *T. decipiens* as a magnificent, palm-like Umbellifer, exuding, when cut or bruised, a copious, fragrant gum or resin, smelling of spirits of turpentine and carrots, and having fragrant flowers also. He adds that it is usually biennial, dying altogether after flowering; but sometimes the paniculate inflorescence alone dies, and the plant becomes branched.

The specimen here figured flowered in the succulent house of the Royal Gardens in April of the present year. It has perfected seeds since the drawing was made.—*J. D. H.*

---

Fig. 1. Reduced figure of the entire plant. 2. Portion of flowering panicle. 3. Ditto of leaf. 4. Flower. 5. Imperfect ditto at base of umbel. 6. Fruit. 7. Ditto. 8. Transverse section of unripe ditto:—*all magnified, except 2, 3, and 6, which are of nat. size.*







EPIMEDIUM ALPINUM; var. *rubrum*.

*Red-flowered Barren-wort.*

Nat. Ord. BERBERIDEÆ.—TETRANDRIA MONOGYNIA.

*Gen. Char.* Sepala 8, petaloidea, plana, exterioribus minoribus minusque coloratis, et petala 4 nectariformia cucullata v. calcarata 4-fariam superposita. Stamina 4, libera; antheræ valvulis 2 sursum dehiscentes. Carpellum 1, stigmate parum dilatato; ovula  $\infty$ , juxta suturam ventralem 2-serialia. Capsula siliquæformis, 2-valvis, valva dorsali minore decidua, majorem placentiferam nudante. Semina pauca, raphe arillæformi; embryo leviter incurvus.—Herbæ Europæ et Asiæ temperatæ incolæ, rhizomate repente. Folia pinnatim semel bisve 3-secta, foliolis denticulatis, caulina 1-2. Racemi simplices v. subramosi, terminales v. oppositifolii. Flores varie colorati.

EPIMEDIUM *alpinum*; sparse glanduloso-pilosum, foliis radicalibus v. caulinis 2-ternatis, foliolis ovato-cordatis acuminatis ciliolato-serratis, sepalis concavis obtusis, petalis interioribus cucullatis in calcar horizontale petalum exterius subæquans productis, antheris linearibus apiculatis filamentis brevibus.

Var. *rubrum*; foliis rubro-marginatis, petalis exterioribus rubris.

EPIMEDIUM *rubrum*. Morren in Journ. d'Hort. 1844. Regel in Ind. Sem. Hort. Petrop. 1856, p. 33. Gartenflora, 1857, p. 21.

A very elegant, hardy, herbaceous plant, equally suited for the shady border or rockwork, and for early greenhouse decoration. Originally introduced into the St. Petersburg Gardens, from Japan, in 1844, and since cultivated in various establishments. The specimen here figured has flowered in the Royal Gardens in April and May for several years past. I find no character whatever, except the rather larger size and the red colour of the flowers, by which it may be distinguished from the well-known reddish-yellow-flowered *Epimedium alpinum*, a plant of which no detailed description is required.

It is very much to be desired that plants of the habit of growth of that here figured should be more extensively cultivated. Their forms are peculiarly graceful, and suited for pot-culture and table-decoration; their bright foliage is



rigid, and retains its appearance uninjured for weeks, whether in-doors or out-of-doors, and nothing can exceed the delicate grace of the panicle of nodding flowers. There are several other species of *Epimedium* equally deserving of culture, as *E. macranthum*, *E. Musschianum* (Tab. nostr. 3745), *E. pinnatum* (Tab. 4456), *E. violaceum* (Tab. 3791), and *E. diphyllum* (Tab. 3448). All are hardy, all suited for decoration, and a collection of half-a-dozen of the spring-flowering species, brought forward into flower at the same time by a skilful gardener, would deservedly command a high award at any horticultural exhibition.—*J. D. H.*

---

Fig. 1. Inner petal. 2. Ovary. 3. Stamen:—*all magnified.*



# BOTANICAL MAGAZINE ADVERTISER.

## HYACINTHS AND OTHER DUTCH BULBS.

WILLIAM CUTBUSH AND SON beg to announce that their Catalogue of the above now ready, and will be sent on prepaid application.

The Bulbs are unusually fine this Season.

HIGHGATE NURSERIES, LONDON, N.

## BEAUTIFUL FOXGLOVES.

EVERY AND SON can now supply New Seed of their fine strain of the above, in 1s., 1s. 6d. and 2s. 6d. packets; likewise plants to bloom next season, at 6s. per dozen.

A Plate of one of the Varieties will appear in the 'Floral Magazine' for October, 1867.

DORKING AND REIGATE NURSERIES.

## NEW ZEALAND NURSERY, ST. ALBAN'S, HERTS.

### J. WATSON'S

## BEAUTIFUL BEDDING PELARGONIUM, 'EXCELSIOR,'

now ready. Colour of *Indian Yellow*; fine truss, and habit of *Lord Palmerston*. Price 5s. each; 36s. per doz. to the Trade.

MISS WATSON, ready August 25; MRS. DIX, May 1. The two have received Ten First-Class Certificates and Extra Prize Money.

## FINE NEW TABLE APPLE, 'ST. ALBAN'S PIPPIN.'

ripe in April. Plants ready in November, 5s. each; 36s. per doz. to the Trade.

*Descriptive List sent on application.*

## FRESH IMPORTED DUTCH FLOWER-ROOTS.

### MESSRS. SUTTON

HAVE RECEIVED THEIR FIRST CONSIGNMENT OF THE ABOVE IN EXCELLENT CONDITION, AND ARE NOW PREPARED TO EXECUTE ORDERS FOR

SUTTON'S COMPLETE COLLECTIONS OF FLOWER-ROOTS, FOR BLOOMING DURING WINTER AND SPRING.

#### FOR POTS AND GLASSES.

Complete Collection (carriage free)	£2	2	0
" " (carriage free)	1	1	0
" " " " " "	0	10	6

#### FOR OPEN GROUND.

Complete Collection (carriage free)	£2	2	0
" " (carriage free)	1	1	0
" " " " " "	0	10	6

### SUTTON'S COLLECTIONS OF HYACINTHS FOR EXHIBITION

Include all the Varieties so much admired at the Spring Shows. Price 12s. per dozen, or £4. 4s. per hundred. CHEAPER ROOTS, 6s. and 9s. per dozen.

### HYACINTHS FOR BEDDING PURPOSES.

3s. per dozen, 21s. per hundred.

*For Particulars of other Flower-Roots see*

SUTTON'S AUTUMN CATALOGUE FOR 1867,

Gratis and Post-free on application.

SUTTON AND SONS, ROYAL BERKS SEED ESTABLISHMENT, READING.





**BENTHAM AND HOOKER'S 'GENERA PLANTARUM,' COMPLETION OF VOL. I.**  
*Now Ready.*

**GENERA PLANTARUM**, ad Exemplaria imprimis in Herbariis Kewensibus servata definita. By G. BENTHAM, F.R.S., and Dr. J. D. HOOKER, F.R.S. Part III. 15s. Also Vol. I. complete, 50s.

**COMPLETION OF 'A SECOND CENTURY OF ORCHIDACEOUS PLANTS.'**  
*Now Ready.*

**A SECOND CENTURY OF ORCHIDACEOUS PLANTS**, selected from the subjects published in Curtis's 'Botanical Magazine' since the issue of the 'First Century.' Edited by JAMES BATEMAN, Esq., F.R.S. Royal 4to. Part X., 10 Coloured Plates, 10s. 6d. Also the Work Complete, with 100 Coloured Plates, in one handsome volume, Royal 4to, Cloth, gilt top, £5. 5s.

*Now Ready.*

**BRITISH SEAWEEDS**; an Introduction to the Study of the Marine ALGÆ of Great Britain and the Channel Islands. By S. O. GRAY. Crown 8vo, 16 Coloured Plates, 10s. 6d.

L. REEVE AND CO., 5, HENRIETTA STREET, COVENT GARDEN.

**NEW PLANTS.**

On and after the 14th of October,

**E. G. HENDERSON AND SON**

Will send out the following New and Beautiful Decorative Flowering Plants for 1867-8.

- New Bedding Fuchsia, 'GOLDEN FLEECE' (1st Class Certificate).
- New Double-Flowered Pelargonium, 'PRINCE OF NOVELTIES.'
- New Double-Flowered Zonale Pelargonium, 'TRIUMPH' (Brilliant Scarlet).
- New Large-Flowered Hybrid Pelargonium, 'GRANDIS ODORATA' (1st Class Certif.).
- New Striped-Flowered Zonal Pelargonium, 'AURANTIA STRIATA.'
- New Nosegay Pelargonium, 'CRIMSON NOSEGAY.'
- New Forcing Pink, 'PLATO.'
- New Tree or Shrubby Garden Pink, 'ROSE OF ENGLAND.'
- New Remarkable Flowered Stove Shrub, 'DALECHAMPIA ROEZLIANA ROSEA' (1st Class Certificate).
- New Double-Flowered Amaryllis, 'ALBERTI PLENA.'

\* Figured in the Present Number of the 'Floral Magazine.'

Full descriptions of the foregoing, and other most desirable Novelties, are given in  
**E. G. HENDERSON AND SON'S NEW DESCRIPTIVE BULB CATALOGUE,**  
Which will be forwarded Post-free on application.

WELLINGTON NURSERY, ST. JOHN'S WOOD, LONDON, N.W.

**BARR AND SUGDEN,**  
12, KING STREET, COVENT GARDEN, W.C.

ORDERS 21s. AND UPWARDS SENT CARRIAGE PAID.

*Now Ready,*

**THE "GUIDE TO WINTER AND SPRING GARDENING."**

A copy, during the first week in September, will be sent free to each of our customers, also to intending purchasers on sending in their addresses.

The contents of the present edition of the 'Guide' will be found exceedingly interesting to those who are fond of bulbous plants. In addition to the usual "DUTCH BULBS," is given a selection of choice Cape, Japan, and other bulbous and tuberous-rooted plants; and as many of our customers and intending purchasers may be unacquainted with some of these, we have in anticipation prepared an album with coloured illustrations of most of them, and have placed it at the service of those who can make it convenient to call at our warehouse.

Collections of easily-cultivated Bulbs for out-door decoration, 10s. 6d., 21s., 42s., 63s., and 84s.  
Collections of easily-cultivated Bulbs for in-door decoration, 10s. 6d., 21s., 42s., 63s., and 84s.

BARR AND SUGDEN, 12, KING STREET, COVENT GARDEN, W.C.



# THE SEABOARD PARISH,

By the Author of

**"Annals of a Quiet Neighbourhood,"**

*Is begun in the October Part, and will be continued Monthly.*

PICTURES FROM CHURCH HISTORY,

By Professor ISLAY BURNS,

*Is begun in the October Part, and will be continued Monthly.*

SAVING KNOWLEDGE,

By THOMAS GUTHRIE, D.D., and

W. G. BLAIR, D.D.,

*Is begun in the October Part, and will be continued Monthly.*



THE CHRISTIAN LIFE,

By the Mistress of a Household,

*Is begun in the October Part, and will be continued Monthly.*

OCCUPATIONS OF A RETIRED LIFE,

By EDWARD GARRETT,

*Is begun in the October Part, and will be continued Monthly.*

OLD TESTAMENT CHARACTERS,

By THOMAS GUTHRIE, D.D.,

*Is begun in the October Part, and will be continued Monthly.*

Works by THOMAS GUTHRIE, D.D., Editor of 'The Sunday Magazine.'

Crown 8vo, 3s. 6d.,

**OUR FATHER'S BUSINESS.**

Crown 8vo, 3s. 6d.,

**OUT OF HARNESS.**

Crown 8vo, 3s. 6d.,

**MAN AND THE GOSPEL.**

"In point of striking thought, as well as apposite and beautiful illustration, this work will stand comparison with any which bears its author's name. The subjects of which it treats are as varied as they are interesting, and belong to that class which, as Lord Bacon says, 'come home to men's business and bosoms.'"—*Edinburgh Courant.*

Crown 8vo, 3s. 6d.,

**THE PARABLES**

READ IN THE LIGHT OF THE PRESENT DAY.

"No one can so fittingly explain the Parables of the New Testament as Dr. Guthrie. He is a master of imagery, who scarcely writes a sentence without a comparison, and who has, moreover, the no less essential qualities of clear spiritual insight and strong, shrewd sense."—*Freeman.*

Crown 8vo, 3s. 6d.,

**SPEAKING TO THE HEART.**

"Dr. Guthrie never speaks without speaking to the heart; but these discourses bear with unwonted vividness the impress of his great emotional nature. They glow, they sparkle, they burn with intense feeling. We have seldom looked into a more fascinating book."—*English Churchman.*

32mo, 1s. 6d.,

**EARLY PIETY.**

[In the Press.]

STRAHAN and CO., LONDON, EDINBURGH, AND DUBLIN.



# HEATING BY HOT WATER.

---

It is now generally admitted that Buildings of any kind can be more effectually warmed by Hot Water than by any other means; but as so much depends on the way in which the Apparatus is fixed, it is of the greatest importance that it be done by experienced men.

J. JONES & SONS have every facility for executing work in the best manner at a moderate cost, and having the largest stock in the Kingdom of Boilers, Pipes, etc., they can complete work without delay, their great experience in Hot Water Heating enables them in all cases to supply an Apparatus best suited to the purpose for which it is intended, and they will be happy to send to any part of the Country, at a moderate charge, to take particulars of work and prepare plans, etc., or on receipt of particulars per post they will forward estimates free of charge.

J. JONES & SONS having been so extensively patronized for many years by the Nobility, Clergy, Gentry, and others, are enabled to give references to work done in nearly every part of the Kingdom.

J. JONES & SONS are prepared to estimate for Warming, to any extent,—

CHURCHES.  
CHAPELS.  
SCHOOLS.  
LECTURE HALLS.  
BANKS.  
PUBLIC OFFICES.  
WAREHOUSES.  
FACTORIES.

GREENHOUSES.  
CONSERVATORIES.  
VINERIES.  
HOTHOUSES.  
FORCING PITS.  
PINE STOVES.  
PEACH HOUSES.  
ORCHARD HOUSES.

HALLS AND PASSAGES.  
PICTURE GALLERIES.  
MUSIC ROOMS.  
BILLIARD ROOMS.  
BATHS.  
DRYING CLOSETS.  
COACH HOUSES.  
HARNESS ROOMS.

J. JONES & SONS' Apparatus is simple in construction, moderate in cost, and economical in working.

It is equally available for the Amateur's Greenhouse, or the longest range of Forcing Houses; for the smallest Chapel or the largest Church; for Private Offices, or those of Public Companies.

It is admirably adapted for Dwelling Houses, as coils of pipes can be placed in any part, for warming the various rooms. One or more Baths may be heated from the same boiler, and a constant supply of hot water obtained in any part of the house.

For Warehouses and Workshops this system of heating is unsurpassed, as, unlike stoves and hot-air flues, the circulation of hot water in pipes is perfectly safe, and the management of Apparatus can be left to any ordinary workman.

---

**J. JONES & SONS,**  
**IRON MERCHANTS AND HORTICULTURAL ENGINEERS,**  
6, BANKSIDE, SOUTHWARK, LONDON, S.E.



Third Series.

No. 275.

VOL. XXIII. NOVEMBER.

[Price 3s. 6d. col<sup>d</sup>. 2s. 6d. plain.]

OR No. 970 OF THE ENTIRE WORK.

CURTIS'S  
BOTANICAL MAGAZINE,

COMPRISING

THE PLANTS OF THE ROYAL GARDENS OF KEW,  
AND OF OTHER BOTANICAL ESTABLISHMENTS IN GREAT BRITAIN,  
WITH SUITABLE DESCRIPTIONS;

BY

JOSEPH DALTON HOOKER, M.D., F.R.S. L.S. & G.S.,

Director of the Royal Botanic Gardens of Kew.



~~~~~  
Nature and Art to adorn the page combine,  
And flowers exotic grace our northern clime.  
~~~~~

LONDON:

L. REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

1867.



# WORKS ON METEOROLOGY.

---

## SUNSHINE AND SHOWERS:

THEIR INFLUENCES THROUGHOUT CREATION.

A Compendium of Popular Meteorology. By ANDREW STEINMETZ, Esq., of the Middle Temple, Barrister-at-Law, Author of 'A Manual of Weather-Casts,' etc. etc. Crown 8vo, Wood Engravings, 7s. 6d.

This Work not only treats fully all the leading topics of Meteorology, but especially of the use of the Hygrometer, for which systematic Rules are now for the first time drawn up. Among other interesting and useful subjects, are chapters on Rainfall in England and Europe in general—Wet and Dry Years—Temperature and Moisture with respect to the health of Plants and Animals—The Wonders of Evaporation—Soil Temperature—The Influence of Trees on Climate and Water Supply—The Prognostication of the Seasons and Harvest—The Characteristics and Meteorology of the Seasons—Rules of the Barometer—Rules of the Thermometer as a Weather Glass—Popular Weather-casts—Anemometry—and finally, What becomes of the Sunshine—and what becomes of the Showers.

---

*By the same Author,*

## EVERYBODY'S WEATHER-GUIDE.

The Use of Meteorological Instruments clearly explained; with Directions for securing at any time a Probable Prognostic of the Weather. By A. STEINMETZ. 1s.

---

## METEORS, AEROLITES,

AND

## FALLING STARS.

By Dr. T. L. PHIPSON. Crown 8vo, Woodcuts and Lithographic Frontispiece, 6s.

A very complete summary of Meteoric Phenomena, from the earliest to the present time.

---

## PHOSPHORESCENCE;

OR, THE EMISSION OF LIGHT BY MINERALS, PLANTS, AND ANIMALS.

By Dr. T. L. PHIPSON, F.C.S. 30 Wood Engravings and Coloured Frontispiece, 5s.

An interesting account of the various substances in the mineral, vegetable, and animal kingdoms which possess the remarkable property of emitting light.

---

L. REEVE & CO., 5, Henrietta Street, Covent Garden.

---

SEWING MACHINES.—The FLORENCE. Purchasers should see the FLORENCE which has been awarded a Silver Medal, the Highest Premium for a Family Sewing Machine, at the PARIS EXPOSITION, July, 1867. It also received the Highest Prize, a Gold Medal, at Exhibition of the American Institute, New York, 1865 (in competition with every well-known Machine). It makes four different stitches, including the Lock Stitch, has patent reversible feed-motion, fastens off its seam without stopping, and executes in a superior manner all kinds of Sewing ever required in a family. We warrant it superior to all others for family use. If any purchaser of the FLORENCE is dissatisfied with it, after a fair trial, we will give in exchange any Sewing Machine of a price known to the trade. Prospectus and Samples of work, post-free. Agents Wanted. Address, FLORENCE SEWING MACHINE COMPANY, 97, Cheapside, London. Agents: MAY and SHAW, Soho Bazaar (London Street Entrance), London.



# BOTANICAL MAGAZINE ADVERTISER.

## HYACINTHS AND OTHER DUTCH BULBS.

WILLIAM CUTBUSH AND SON beg to announce that their Catalogue of the above is now ready, and will be sent on prepaid application.

The Bulbs are unusually fine this Season.

HIGHGATE NURSERIES, LONDON, N.

## BEAUTIFUL FOXGLOVES.

J. IVERY AND SON can now supply New Seed of their fine strain of the above, in 1s., 1s. 6d. and 2s. 6d. packets; likewise plants to bloom next season, at 6s. per dozen.

A Plate of one of the Varieties will appear in the 'Floral Magazine' for October, 1867.

DORKING AND REIGATE NURSERIES.

## NEW ZEALAND NURSERY, ST. ALBAN'S, HERTS.

### J. WATSON'S

## BEAUTIFUL BEDDING PELARGONIUM, 'EXCELSIOR.'

Now ready. Colour of *Indian Yellow*; fine truss, and habit of *Lord Palmerston*. Price 5s. each; 36s. per doz. to the Trade.

MISS WATSON, ready August 25; MRS. DIX, May 1. The two have received Ten First-Class Certificates and Extra Prize Money.

## FINE NEW TABLE APPLE, 'ST. ALBAN'S PIPPIN.'

Ripe in April. Plants ready in November, 5s. each; 36s. per doz. to the Trade.

*Descriptive List sent on application.*

## FRESH IMPORTED DUTCH FLOWER-ROOTS.

### MESSRS. SUTTON

HAVE RECEIVED THEIR FIRST CONSIGNMENT OF THE ABOVE IN EXCELLENT CONDITION, AND ARE NOW PREPARED TO EXECUTE ORDERS FOR

SUTTON'S COMPLETE COLLECTIONS OF FLOWER-ROOTS, FOR BLOOMING DURING WINTER AND SPRING.

#### FOR POTS AND GLASSES.

Complete Collection (carriage free)	£2	2	0
" " (carriage free)	1	1	0
" " "	0	10	6

#### FOR OPEN GROUND.

Complete Collection (carriage free)	£2	2	0
" " (carriage free)	1	1	0
" " "	0	10	6

### SUTTON'S COLLECTIONS OF HYACINTHS FOR EXHIBITION

Include all the Varieties so much admired at the Spring Shows. Price 12s. per dozen, or £4. 4s. per hundred. CHEAPER ROOTS, 6s. and 9s. per dozen.

### HYACINTHS FOR BEDDING PURPOSES.

3s. per dozen, 21s. per hundred.

*For Particulars of other Flower-Roots see*

SUTTON'S AUTUMN CATALOGUE FOR 1867,

Gratis and Post-free on application.

SUTTON AND SONS, ROYAL BERKS SEED ESTABLISHMENT, READING.





## NEW ROSES FOR 1867-1868.

EUGÈNE VERDIER fils aîné, NURSERYMAN, 3, RUE DUNOIS, PARIS,

Is now Publishing his **CATALOGUE** of the above, which will comprise 69 New Varieties for 1867-1868. This **CATALOGUE** to be obtained Gratis, either direct from him, or of his Agents,

BETHAM & BLACKITH, Cox's Quay, Lower Thames Street, London, E.C.

## EXHIBITION OF CHRYSANTHEMUMS.

JOHN SALTER'S COLLECTION OF THESE BEAUTIFUL FLOWERS  
Will be in Bloom

ON AND AFTER THE 5TH OF NOVEMBER.

The WINTER GARDEN will be Open every day except Sunday.

Versailles Nursery, William Street, Vale Place, Hammersmith, W.

## NEW PLANTS.

On and after the 14th of October,

## E. G. HENDERSON AND SON

Will send out the following New and Beautiful Decorative Flowering Plants for 1867-8.

- New Bedding Fuchsia, 'GOLDEN FLEECE' (1st Class Certificate).
- New Double-Flowered Pelargonium, 'PRINCE OF NOVELTIES.'
- New Double-Flowered Zonale Pelargonium, 'TRIUMPH' (Brilliant Scarlet).
- New Large-Flowered Hybrid Pelargonium, 'GRANDIS ODORATA' (1st Class Certificate).
- New Striped-Flowered Zonal Pelargonium, 'AURANTIA STRIATA.'
- New Nosegay Pelargonium, 'CRIMSON NOSEGAY.'
- New Forcing Pink, 'PLATO.'
- New Tree or Shrubby Garden Pink, 'ROSE OF ENGLAND.'
- New Remarkable Flowered Stove Shrub, 'DALECHAMPIA RÆZLIANA ROSEA' (1st Class Certificate).
- New Double-Flowered Amaryllis, 'ALBERTI PLENA.'

\* Figured in the Present Number of the 'Floral Magazine.'

Full descriptions of the foregoing, and other most desirable Novelties, are given in  
**E. G. HENDERSON AND SON'S NEW DESCRIPTIVE BULB CATALOGUE**  
Which will be forwarded Post-free on application.

WELLINGTON NURSERY, ST. JOHN'S WOOD, LONDON, N.W.

Perfect Freedom from Coughs in Ten Minutes after use,  
AND INSTANT RELIEF AND A RAPID CURE OF  
**ASTHMA, CONSUMPTION, INFLUENZA, COUGHS, COLDS,**  
AND ALL DISORDERS OF THE BREATH, THROAT, AND LUNGS,  
ARE ENSURED BY



Which have a most agreeable taste.

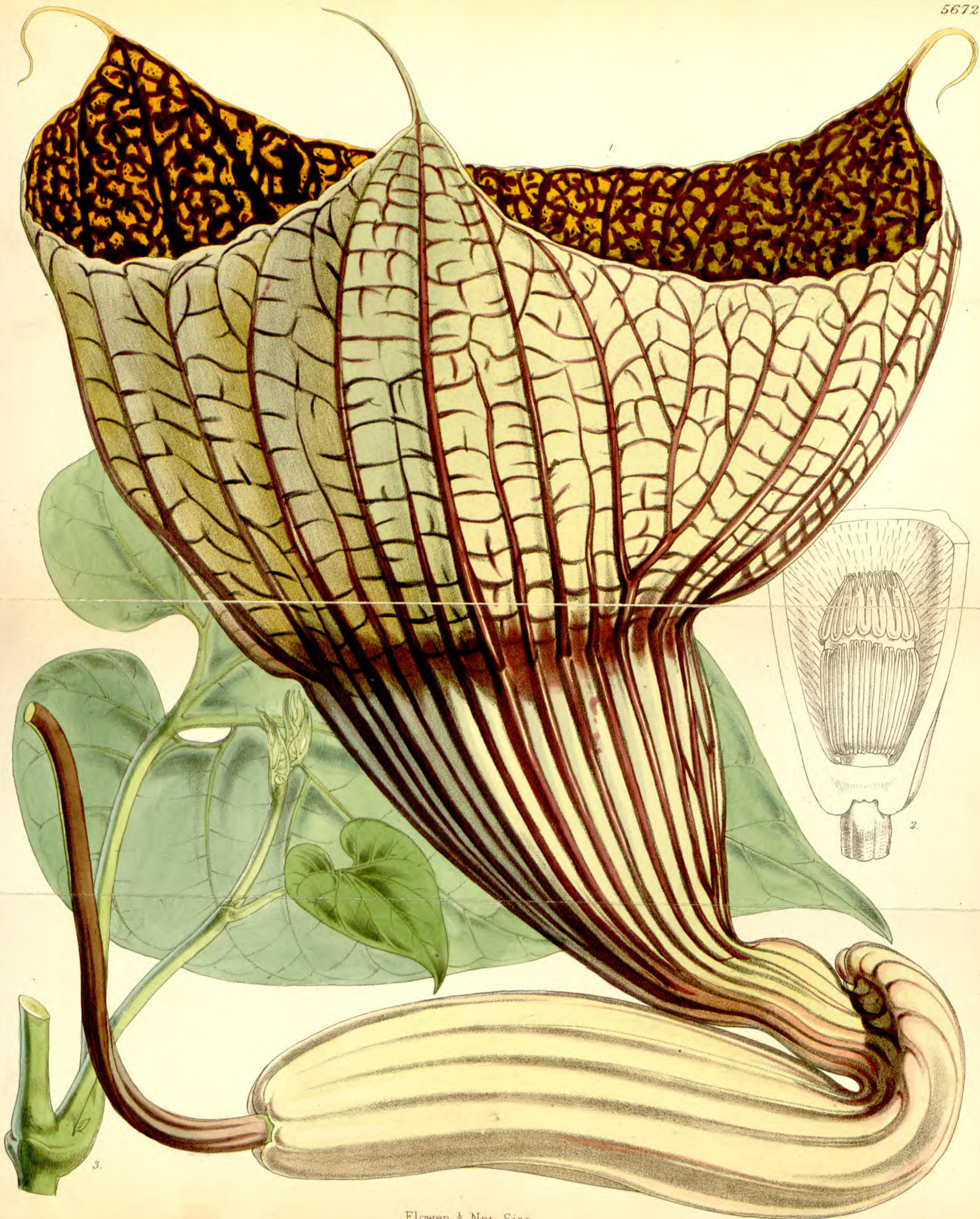
**CURES OF ASTHMA AND COUGHS.**

"In allaying any irritation of the chest or lungs, checking all disposition to coughing, and promoting that inestimable boon, a comfortable night's refreshing sleep, they certainly stand unrivalled.—J. H. EVANS, Druggist."  
All throat affections are immediately relieved by allowing one occasionally to dissolve in the mouth.  
To Singers and Public Speakers they are invaluable for clearing and strengthening the voice.

Price 1s. 1½d., 2s. 9d., 4s. 6d., and 11s. per Box. Sold by all Druggists.

"Lymm, Cheshire."



Flower  $\frac{1}{2}$  Nat. Size.



ARISTOLOCHIA GOLDIEANA.

*The Rev. H. Goldie's Aristolochia.*

Nat. Ord. ARISTOLOCHIEÆ.—GYNANDRIA HEXANDRIA.

*Gen. Char. (Vide supra, TAB. 5295.)*

ARISTOLOCHIA *Goldieana*; glaberrima, foliis ovato- v. triangulari-cordatis acuminatis, basi profunde exsculptis, floribus maximis, perianthii re-  
fracti utriculo elongato subclavato, limbo infundibuliformi-campanu-  
lato, ore ampliato truncato obtuse 3-lobo, lobis caudato-acuminatis,  
staminibus ad 24, columnæ lobis ad 12 2-cruribus.

ARISTOLOCHIA *Goldieana*. *Nob. in Trans. Linn. Soc. v. 25. p. 185. t. xiv.*

South America has hitherto been considered the head-  
quarters of the gigantic flowers *Aristolochias*, so well known  
in the stoves of the gardens of the curious for the fine  
colouring of their perianth and their atrocious odour. Of  
these, Humboldt, upwards of half a century ago, published  
an account of one (*A. grandiflora*, Tab. nostr. 4368-9) whose  
flowers were worn on the head by the Indian children, and  
which has often been quoted as (excepting perhaps the *Rafflesia*  
*Arnoldii*) the largest flowered plant hitherto known. How-  
ever this may be, the American *Aristolochias* are eclipsed by  
the discovery of the present plant, of which specimens, pre-  
served in alcohol, were communicated to me, in 1864, by the  
Rev. W. C. Thomson, from the mouth of the Old Calabar  
river, and which I described and figured in the 'Linnean  
Transactions' above quoted, and named, in accordance with  
Mr. Thomson's wish, after his fellow-labourer, the Rev. Hugh  
Goldie, of the United Presbyterian Missionary Society.

The merit of flowering *A. Goldieana* is due to Mr. Clarke,  
the zealous and intelligent Curator of the Glasgow Botanic  
Gardens, who received living specimens from his active cor-  
respondent Mr. Thomson, and flowered a plant of it in July  
of the present year, and the blossom of which he kindly  
transmitted to the Magazine for figuring.



*Aristolochia Goldieana* differs from all its numerous congeners, except two others, also West African species, in the number of stamens, which are about twenty-four, six being the normal number in the genus; also, in the three-lobed perianth, and in the twelve bifid stigmatic lobes of the column. It has also been gathered in forests near Elugu, by the Bishop of Sierra Leone, who, in 1859, gave specimens to the late Mr. Barter, the Botanist to Baikie's Niger Expedition, and which are preserved in the Hookerian Herbarium. It was also found at Sierra Leone by G. Mann. Its odour of putrid meat is as offensive as that of the Brazilian species.—*J. D. H.*

---

I greatly regret having to reduce the figure to one-half its natural size to make it available for the Magazine,—the flower drawn having measured 26 by 11 inches.

Fig. 1. Portion of stem and leaf:—*natural size*. 2. Vertical section of side of perianth, showing the colour of stamens and stigmas:—*magnified*.







TAB. 5673.

LILIUM LEICHTLINII.

*Max Leichtlin's Lily.*

Nat. Ord. LILIACEÆ.—HEXANDRIA MONOGYNIA.

Gen. Char. (*Vide supra*, TAB. 5338.)

LILIUM *Leichtlinii*; caule 2-3-pedali gracili glaberrimo 1-floro, foliis alternis sparsis lineari-lanceolatis 3-4 poll. longis  $\frac{1}{4}$  poll. latis acutis sessilibus subnerviis ima basi ad insertionem utrinque pilosulis v. villosulis, flore nutante 4 poll. diametro, perianthii foliolis e basi oblonga lanceolatis obtusis revolutis, exterioribus angustioribus, interioribus basin versus 2-cristatis 2-carinatisve cristis carinisve pubescentibus, omnibus aureis purpureo-maculatis, filamentis stramineis, antheris brunneis.

Bulbs of this charming Lily were received by Messrs. Veitch and Sons from Japan, along with those of *L. auratum*, and communicated to me for determination in July of the present year. Though resembling in some respects *L. tigrinum* in the form of the flower, it differs from that plant, not only in colour, but in the graceful habit, scattered leaves, and crested inner segments of the perianth. From the prince of the genus, *L. auratum*, which in some respects it approaches, it differs both in the colour and form of the perianth-leaves, and in wanting the long processes on these which *L. auratum* bears.

I have named this plant after a zealous cultivator of the genus, to whom the Royal Gardens are indebted for various rare species, M. Max Leichtlin, of Carlsruhe, a gentleman who is especially devoting himself to the elucidation, by culture, of the numerous species and races of this noble genus of bulbous plants.

DESCR. *Stem* tall, slender, two to three feet high, terete, glabrous, except where the leaf joins the stem at each side, where a few long hairs appear. *Leaves* alternate, sessile, rather remote, linear-lanceolate, acute, spreading and recurved, three to four inches long by a quarter of an inch

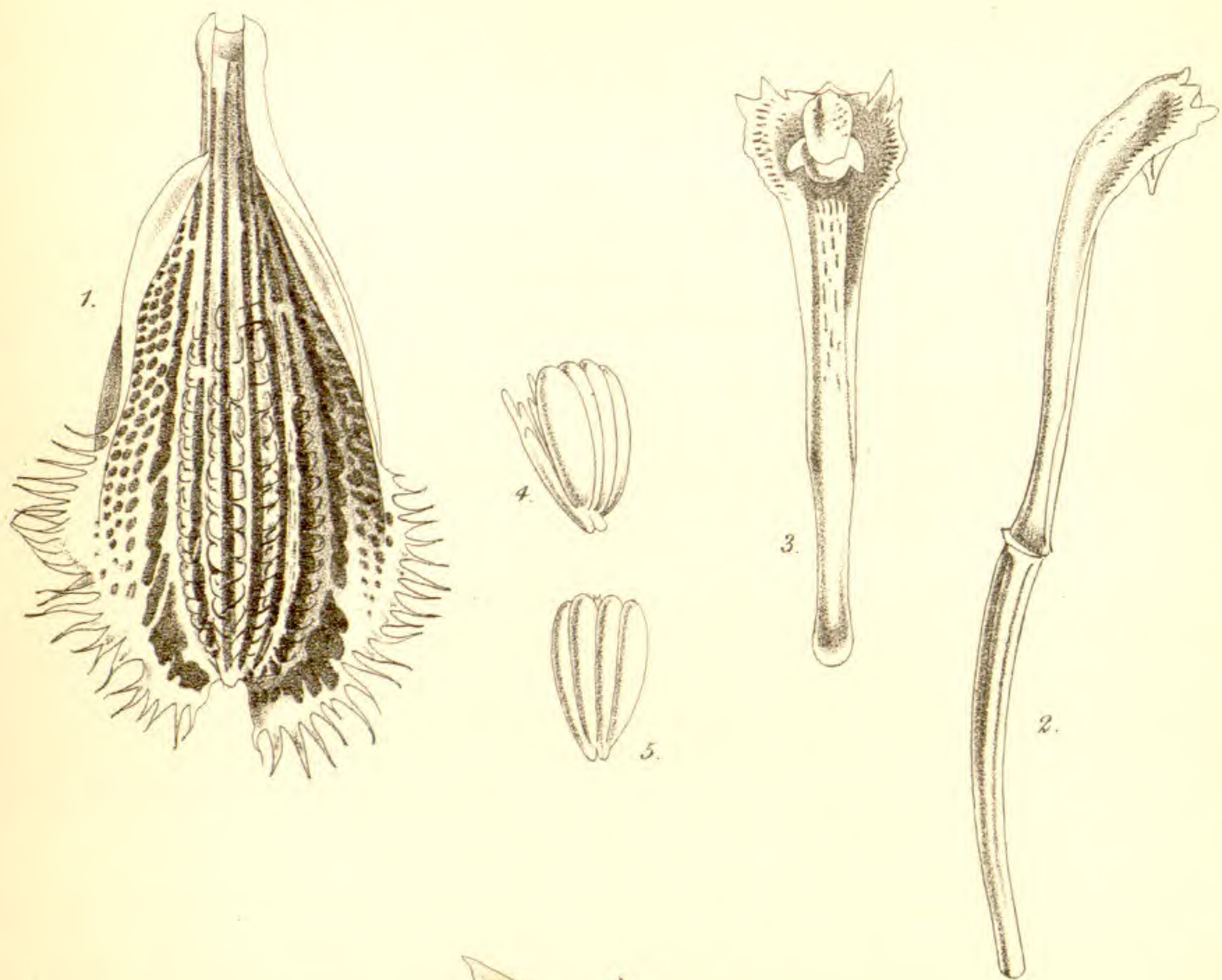
NOVEMBER 1ST, 1867.



broad, pale bright green; nerves obscure. *Flowers* solitary in our specimens, nodding, four inches in diameter, pale golden-yellow, spotted with small oblong blotches of clear red-purple, or maroon-brown. *Perianth* segments revolute, outer narrower, with two keeled pubescent ridges from below the middle to the base; inner segments broader, one inch across, the ridges dilating into irregularly-toothed crests on the disk below the middle. *Filaments* straw-coloured, long, curved; *anthers* yellow brown or purplish, half an inch long. *Style* and *stigma* yellow.—J. D. H.

---







TAB. 5674.

CÆLOGYNE HUMILIS.

*Dwarf Pleione.*

Nat. Ord. ORCHIDÆÆ.—GYNANDRIA MONANDRIA.

Gen. Char. (*Vide supra*, TAB. 5462.)

CÆLOGYNE (Pleione) *humilis*; pseudobulbis lagenæformibus, bracteâ oblongo-lanceolatâ petaloideâ ovario longiore demum retractâ, pedunculo denudato, sepalis petalisque lineari-lanceolatis patentibus planis, labello ciliato emarginato, lineis 6 fimbriatis distantibus venis totidem coloratis interjectis. *Lindl.*

PLEIONE *humilis*. *Don*, *Fl. Nep.* p. 37. *Paxt. Fl. Gard. t.* 51. *Lemaire*, *Jard. Fl.* p. 158.

This pretty *Pleione*, although long since introduced and figured, had been lost to the country for many years; no doubt through inattention to its habits and constitution. Fortunately a fresh supply of plants was recently obtained (through Dr. Anderson, of the Calcutta Botanic Gardens) from Sikkim by the Royal Gardens at Kew, and it was here that the one represented in the Plate flowered last winter. It is quite a mountain plant, having been found on the Indian Alps, in Nepal, Sikkim, and Bhotan, at an elevation of seven to eight thousand feet, growing among moss in shady places, and even on the trunks of trees. Dr. Hooker met with several varieties during his travels in the Himalaya, where this and other species take the place of our autumn Crocuses, throwing up masses of gay flowers after the leaves have disappeared. Excepting *Cœlogyne maculata*, which is found two thousand feet lower, all the *Pleione* section of *Cœlogyne* are easily cultivated in the shadiest part of the coolest house; and they form a most interesting group, to which other fine species, not yet introduced, will, I trust, ere long be added. They require to be grown in a pot.

DESCR. *Pseudobulbs* in the form of bottle-flasks, from one to

NOVEMBER 1ST, 1867.



two inches long, of a dark purplish-green, crowned with solitary, narrow, and rather long acuminate dark green *leaves*. *Peduncle* one-flowered, at first enclosed in a pale violet *bract*, which afterwards shrivels up and leaves the peduncle naked. *Sepals* and *petals* open, linear-lanceolate, smooth and even at edges, white faintly tinted with rose. *Lip* fringed in its upper portion, emarginate, of the same colour as the petals, except where it is traversed by six parallel veins (that are also fringed), and between each of which rich crimson streaks are interposed. *Column* clavate, distinctly adnate to the base of the lip, of which it is not much more than half the length.—*J. B.*

---

Fig. 1. Lip spread out. 2. Side view of column and ovary. 3. Front view of ditto. 4, 5. Pollen masses:—*all more or less magnified.*







TAB. 5675.

BEGONIA CLARKEI.

*Major Trevor Clarke's Begonia.*

Nat. Ord. BEGONIACEÆ.—MONÆCIA POLYANDRIA.

*Gen. Char. (Vide supra, TAB. 4131.)*

BEGONIA (§ Huszia) *Clarkei*; caulescens, caule erecto robusto puberulo colorato parce ramoso, foliis oblique rotundato-cordatis obtusis lobulatis et crenatis nervis radiantibus ciliolatis, superne pallide viridibus, nervis subtus prominulis, stipulis late triangularibus, pedunculis robustis axillaribus 2-bracteatis 2-floris, pedicellis 2-bracteolatis, bracteis bracteolisque late oblongis obtusis, floribus amplis læte roseis, ♀ 5-petalis.

BEGONIA *Clarkei*. *Nob. supra, sub Tab. 5663.*

I have already stated with regard to this lovely *Begonia*, under the description of *B. Veitchii*, that I had, from imperfect specimens, regarded it as a form of the latter plant. A fine-flowering specimen, sent by Major Clarke to the Royal Gardens, shows a considerable difference between them, and enables me to give a figure of it here. From a comparison of this with Tab. 5663 (*B. Veitchii*), it will be seen that the present differs in being a caulescent, branched, pubescent but not pilose plant, with purple stem and branches, large opaque foliage, axillary peduncles, and larger, deep rose-coloured flowers.

*B. Clarkei* is probably a native of a warmer region than *B. Veitchii*, and, as Major Clarke assures me, requires the temperature of a warm greenhouse. This gentleman had possessed the specimens here figured for several years before flowering it, and received it from Messrs. Henderson as a native of Peru. This is apparently the same as a plant gathered by Mandon, near Sorata, in the Bolivian Andes, at an elevation of eight to nine thousand feet, of which specimens, without name, are preserved in the Hookerian Herbarium. Whether this and *B. Veitchii*, together with another allied to



it from the same country, and hitherto unpublished, will eventually prove wholly distinct, is, I think, doubtful; they will probably be extensively hybridized, and thus blended for all but horticultural purposes.

DESCR. A tall succulent herb, two feet high. *Rhizome* stout. *Stem* pubescent, as thick as the little finger, purplish. *Leaves* six to eight inches in diameter, obliquely orbicular-cordate, obtuse, lobulate and crenate, pubescent, dull green above, nerves radiating; *petioles* stout, three to five inches long. *Peduncles* axillary, stout, longer than the petioles, bibracteate at the middle, two-flowered; *pedicels* slender; *bracts* and *bracteoles* one-third to two-thirds of an inch long, pale, oblong, obtuse, ciliate. *Flowers* two to two and a half inches in diameter. *Female perianth* five-peltated, bright rose-red; *petals* obovate retuse or emarginate. *Styles* three, bifid, the arms twisted and surrounded with a spiral, papillose band. *Ovary* three-lobed, with two short wings, and the third produced into a wedge-shaped form. *Placenta* bifid, the segments lobed and covered everywhere with ovules.—J. D. H.

---

Fig. 1. Transverse section of ovary,—*magnified*.







TAB. 5676.

CYMBIDIUM HUTTONI.

*Mr. Hutton's Cymbidium.*

Nat. Ord. ORCHIDÆ.—GYNANDRIA MONANDRIA.

*Gen. Char. (Vide supra, TAB. 5457.)*

CYMBIDIUM *Huttoni*; pseudobulbis aggregatis ampullaceo-ovoideis compressis sulcatis basi vaginatis, foliis 2-nis anguste oblongis obtusis crasse coriaceis enerviis læte viridibus, scapo radicali brevi, squamis paucis brevibus late triangularibus, racemo ad 10-flore, sepalis late obovato-oblongis recurvis acuminatis intus labellique lobo intermedio fasciis brevibus brunneis creberrime transverse notatis, petalis minoribus recurvis intus brunneis, labelli lobis lateralibus erectis obtusis longitudinaliter fasciatis intermedio breviter oblongo, columna elongata semiterete.

At first sight this remarkable plant does not much resemble a *Cymbidium*, but after a careful consideration and comparison with the hitherto published species of this genus I see no reason to separate it: the structure and form of the pollinia and their gland is the same, as are the essential characters of the column and perianth; the very coriaceous nerveless leaves are to be found in *C. tigrinum* (Tab. nostr. 5457), but the very broad perianth-segments and their colour are unique in the genus in so far as I know it.

*C. Huttoni* is a native of Java, and is named after its discoverer, Mr. Henry Hutton (at the request of Messrs. Veitch), in commemoration of his zealous services and early death. Mr. Hutton, a most ardent student and promising collector (son of the Mr. H. Hutton, head gardener to the Right Honourable Lord Houghton), was sent to the East by the Messrs. Veitch, and after twelve months' residence in Java, when, as was hoped, he had become inured to the climate, he fell a victim to his enthusiasm. The plant which commemorates his services flowered with Messrs. Veitch in June of the present year.

NOVEMBER 1ST, 1867.



DESCR. *Pseudobulbs* three to five inches long, elongate ovoid, with straight sides, compressed, grooved, green, sheathed to above the middle. *Leaves* in pairs, six to eight inches long, two to two and a half inches broad, narrow oblong, obtuse, very coriaceous, nerveless, dark green. *Scape* from the base of the pseudobulbs, stout, curved with a few distant, short, triangular, appressed scales. *Raceme* about ten-flowered, pendulous, six to eight inches long. *Flowers* shortly pedicelled, an inch and a half in diameter. *Bracts* small. *Perianth* ringent. *Sepals* recurved, obovate, acuminate, pale brown externally, internally studded with transverse, small, short, chocolate streaks or blotches. *Petals* smaller, but similar in form and direction, dark chocolate inside. *Lip* subsessile, lateral lobes erect, obtuse, greenish, striped with chocolate; *middle lobe* oblong, acute, banded on each side of the median line, like the sepals, but darker. *Column* long, semiterete. *Pollen-gland* bicuspidate.—J. D. H.

---

Fig. 1. Lip. 2. Column. 3, 4. Pollen :—all magnified.



# THE SEABOARD PARISH,

By the Author of

**"Annals of a Quiet Neighbourhood,"**

*Is begun in the October Part, and will be continued Monthly.*

**PICTURES FROM CHURCH HISTORY,**

By PROFESSOR ISLAY BURNS,

*Is begun in the October Part, and will be continued Monthly.*

**SAVING KNOWLEDGE,**

By THOMAS GUTHRIE, D.D., and

W. G. BLAIR, D.D.,

*Is begun in the October Part, and will be continued Monthly.*



**THE CHRISTIAN LIFE,**

By the Mistress of a Household,

*Is begun in the October Part, and will be continued Monthly.*

**OCCUPATIONS OF A RETIRED LIFE,**

By EDWARD GARRETT,

*Is begun in the October Part, and will be continued Monthly.*

**OLD TESTAMENT CHARACTERS,**

By THOMAS GUTHRIE, D.D.,

*Is begun in the October Part, and will be continued Monthly.*

Works by THOMAS GUTHRIE, D.D., Editor of 'The Sunday Magazine.'

Crown 8vo, 3s. 6d.,

**OUR FATHER'S BUSINESS.**

Crown 8vo, 3s. 6d.,

**OUT OF HARNESS.**

Crown 8vo, 3s. 6d.,

**MAN AND THE GOSPEL.**

"In point of striking thought, as well as apposite and beautiful illustration, this work will stand comparison with any which bears its author's name. The subjects of which it treats are as varied as they are interesting, and belong to that class which, as Lord Bacon says, 'come home to men's business and bosoms.'"—*Edinburgh Courant.*

Crown 8vo, 3s. 6d.,

**THE PARABLES**

READ IN THE LIGHT OF THE PRESENT DAY.

"No one can so fittingly explain the Parables of the New Testament as Dr. Guthrie. He is a master of imagery, who scarcely writes a sentence without a comparison, and who has, moreover, the no less essential qualities of clear spiritual insight and strong, shrewd sense."—*Freeman.*

Crown 8vo, 3s. 6d.,

**SPEAKING TO THE HEART.**

"Dr. Guthrie never speaks without speaking to the heart; but these discourses bear with unwonted vividness the impress of his great emotional nature. They glow, they sparkle, they burn with intense feeling. We have seldom looked into a more fascinating book."—*English Churchman.*

32mo, 1s. 6d.,

**EARLY PIETY.**

[In the Press.]

STRAHAN and CO., LONDON, EDINBURGH, AND DUBLIN.



# HEATING BY HOT WATER.

---

It is now generally admitted that Buildings of any kind can be more effectually warmed by Hot Water than by any other means; but as so much depends on the way in which the Apparatus is fixed, it is of the greatest importance that it be done by experienced men.

J. JONES & SONS have every facility for executing work in the best manner at a moderate cost, and having the largest stock in the Kingdom of Boilers, Pipes, etc., they can complete work without delay, their great experience in Hot Water Heating enables them in all cases to supply an Apparatus best suited to the purpose for which it is intended, and they will be happy to send to any part of the Country, at a moderate charge, to take particulars of work and prepare plans, etc., or on receipt of particulars per post they will forward estimates free of charge.

J. JONES & SONS having been so extensively patronized for many years by the Nobility, Clergy, Gentry, and others, are enabled to give references to work done in nearly every part of the Kingdom.

J. JONES & SONS are prepared to estimate for Warming, to any extent,—

CHURCHES.	GREENHOUSES.	HALLS AND PASSAGES.
CHAPELS.	CONSERVATORIES.	PICTURE GALLERIES.
SCHOOLS.	VINERIES.	MUSIC ROOMS.
LECTURE HALLS.	HOTHOUSES.	BILLIARD ROOMS.
BANKS.	FORCING PITS.	BATHS.
PUBLIC OFFICES.	PINE STOVES.	DRYING CLOSETS.
WAREHOUSES.	PEACH HOUSES.	COACH HOUSES.
FACTORIES.	ORCHARD HOUSES.	HARNESS ROOMS.

J. JONES & SONS' Apparatus is simple in construction, moderate in cost, and economical in working.

It is equally available for the Amateur's Greenhouse, or the longest range of Forcing Houses; for the smallest Chapel or the largest Church; for Private Offices, or those of Public Companies.

It is admirably adapted for Dwelling Houses, as coils of pipes can be placed in any part, for warming the various rooms. One or more Baths may be heated from the same boiler, and a constant supply of hot water obtained in any part of the house.

For Warehouses and Workshops this system of heating is unsurpassed, as, unlike stoves and hot-air flues, the circulation of hot water in pipes is perfectly safe, and the management of Apparatus can be left to any ordinary workman.

---

**J. JONES & SONS,**  
**IRON MERCHANTS AND HORTICULTURAL ENGINEERS,**  
**6, BANKSIDE, SOUTHWARK, LONDON, S.E.**



Third Series.

No. 276.

VOL. XXIII. DECEMBER.

[Price 3s. 6d. col<sup>d</sup>. 2s. 6d. plain.]

OR No. 971 OF THE ENTIRE WORK.

CURTIS'S  
BOTANICAL MAGAZINE,

COMPRISING

THE PLANTS OF THE ROYAL GARDENS OF KEW,  
AND OF OTHER BOTANICAL ESTABLISHMENTS IN GREAT BRITAIN,  
WITH SUITABLE DESCRIPTIONS;

BY

JOSEPH DALTON HOOKER, M.D., F.R.S. L.S. & G.S.,  
Director of the Royal Botanic Gardens of Kew.



Nature and Art to adorn the page combine,  
And flowers exotic grace our northern clime.

Mo. Bot. Garden,

1897.

LONDON:

L. REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

1867.





## SUTTON'S HOME-GROWN SEEDS.

(Carriage free.)

TWO PRIZE MEDALS WERE AWARDED TO "SUTTON'S HOME-GROWN SEEDS," PARIS UNIVERSAL EXHIBITION, 1867.



### SUTTON'S COMPLETE COLLECTIONS OF SEEDS FOR ONE YEAR'S SUPPLY.

#### FOR THE KITCHEN-GARDEN.

No. 1. A Complete Collection, with Instructions on Cultivation . . . . .	£3 3 0	No. 4. A Complete Collection, with Instructions on Cultivation . . . . .	£1 1 0
„ 2. A Complete Collection, do. . . . .	2 2 0	„ 5. A Complete Collection, do. . . . .	0 15 0
„ 3. A Complete Collection, do. . . . .	1 11 6	„ 6. A Complete Collection, do. . . . .	0 10 0
No. 7. A Complete Collection, extra quantities for a large family, £5. 5s.			

#### FOR THE FLOWER-GARDEN.

No. 1. A Complete Collection, with instructions on Cultivation . . . . .	£2 2 0	No. 4. A Complete Collection, with Instructions on Cultivation . . . . .	£0 15 0
„ 2. A Complete Collection, do. . . . .	1 11 6	„ 5. A Complete Collection, do. . . . .	0 10 0
„ 3. A Complete Collection, do. . . . .	1 1 0		
Smaller Collections, from 2s. 6d. to 7s. 6d.			

### SUTTON'S SPRING CATALOGUE AND AMATEUR'S GUIDE FOR 1868

Will shortly be ready, price 1s. Gratis to Customers.

*Five per Cent. allowed for Cash Payments.*

SUTTON AND SONS, ROYAL BERKS SEED ESTABLISHMENT, READING.

### NEW WORKS NOW READY.

**THE BOTANICAL MAGAZINE.** Descriptions and Drawings, beautifully coloured by hand, of New and Rare Plants suitable for Cultivation in the Garden, Hothouse, and Conservatory. By Dr. J. D. HOOKER, F.R.S., Director of the Royal Gardens, Kew. Vol. XXIII. of the Third Series, 72 Coloured Plates by W. FITCH, 42s.

**THE FLORAL MAGAZINE.** Descriptions and Drawings, beautifully coloured by hand, of New Varieties of Flowers raised by the Florists for Cultivation in the Garden, Hothouse, and Conservatory. By the Rev. H. HONYWOOD DOMBRAIN. Vol. VI. for 1867, 48 Coloured Plates by J. ANDREWS, 31s. 6d.

**FLORA VITIENSIS;** a Description of the Plants of the Viti or Fiji Islands, with an Account of their History, Uses, and Properties. By Dr. BERTHOLD SEEMANN, F.L.S. Royal 4to, Part VI. 16 Coloured Plates, 15s.

**A SECOND CENTURY OF ORCHIDACEOUS PLANTS,** selected from the Subjects published in Curtis's 'Botanical Magazine' since the issue of the 'First Century.' Edited by JAMES BATEMAN, Esq., F.R.S. Complete in one vol., royal 4to. 100 Coloured Plates, £5. 5s.

**BRITISH WILD FLOWERS,** Familiarly Described in the Four Seasons. By THOMAS MOORE, F.L.S. With 24 Coloured Plates, 16s.

**BRITISH SEAWEEDS;** an Introduction to the Study of the Marine Algæ of the British Isles. By S. O. GRAY. Crown 8vo, 16 Coloured Plates, drawn expressly for the Work by W. FITCH, 10s. 6d.  
A very complete manual, containing a brief but clear description of every species found around our Coasts, including the Channel Islands, classified according to the most recent and best authorities, with introductory chapters on the structure of Seaweeds, and the best methods of collecting and preserving them.

**THE EDIBLE MOLLUSKS OF GREAT BRITAIN AND IRELAND,** with Recipes for cooking them. By M. S. LOVELL. Crown 8vo, 12 Coloured Plates, 8s. 6d.

**HANDBOOK OF THE BRITISH FLORA.** By G. BENTHAM, F.R.S. New Edition. Crown 8vo, 12s.

**THE ILLUSTRATED BRITISH FLORA.** With a Wood Engraving, including Dissections, of each Species. By G. BENTHAM, F.R.S. Demy 8vo, 2 vols. 1295 Wood Engravings, £3. 10s.

*In a few days,*

**THE LAWS OF BOTANICAL NOMENCLATURE,** as Determined by the recent Botanical Congress at Paris, with an Introduction and Commentary. By ALPHONSE DE CANDOLLE.

L. REEVE AND CO., 5, HENRIETTA STREET, COVENT GARDEN.



# BOTANICAL MAGAZINE ADVERTISER.

## NEW FRUITS.

CHARLES TURNER

Has great pleasure in offering the following valuable NEW FRUITS.

FROGMORE EARLY BIGARREAU CHERRY. Strong plants now ready:—Standards, Pyramids, and Dwarfed, 10s. 6d. each; Maidens, 7s. 6d. each.

GIPSY KING APPLE, 5s. each.

ROUNDWAY MAGNUM BONUM APPLE, 5s. each.

THE ROYAL NURSERIES, SLOUGH.

## NEW HARDY TREES AND SHRUBS.

PAUL AND SON'S NEW DOUBLE CRIMSONED THORN.

This plant of rare merit can be supplied as Standards, Pyramids, six feet feathered, or as Dwarfs in pots for forcing, at 5s. each, or 50s. per dozen.

FIRST-CLASS CERTIFICATES—INTERNATIONAL EXHIBITION AND ROYAL BOTANICAL SOCIETIES.

*Cerasus Mahaleb variegata*, new hardy variegated tree, Standards 5s. each.

## NEW ENGLISH ROSE FOR 1868.

DUKE OF EDINBURGH. (PAUL AND SON'S.)—A seedling raised here is of rich vermilion, very bright, and marked in colour, of good form, very hardy, free and vigorous; much admired at the Nurseries this season. Early orders solicited.

THE OLD NURSERIES, CHESHUNT.

## EXHIBITION OF CHRYSANTHEMUMS.

JOHN SALTER'S COLLECTION OF THESE BEAUTIFUL FLOWERS

Will be in Bloom

ON AND AFTER THE 5TH OF NOVEMBER.

The WINTER GARDEN will be Open every day except Sunday.

Versailles Nursery, William Street, Vale Place, Hammersmith, W.

## THE DORSET NURSERIES, BLANDFORD AND BLANDFORD ST. MARY.

FREDERICK GILL & CO., Nurserymen, Seedsmen, and Florists, beg to invite the attention of Gentlemen who intend Planting, to their large and vigorous STOCK of FOREST, FRUIT, and ORNAMENTAL TREES, SHRUBS, ROSES, etc., extending over many Acres, and not to be surpassed.

Their ROSES on MANETTI STOCKS, of the choicest varieties and superior growth, merit especial mention.

Copy of a Letter received from the Rev. F. RADCLYFFE.

TO THE PROPRIETORS OF THE DORSET NURSERIES.

"Sirs,—I was much pleased to-day with the review of your fine Nursery Stock. Your Manetti Roses are the best propagated of any that I have ever purchased. At a little distance, few can discern whether they are on alien stocks or on their own roots. They are usually budded far too high to prosper.—Yours truly, W. F. RADCLYFFE."

## AMBROISE VERSCHAFFELT, NURSEYMAN,

(PUBLISHER OF THE 'ILLUSTRATION HORTICOLE,') GHENT, BELGIUM,

BEGS TO OFFER THE FOLLOWING NOVELTIES:—

CALADIUM LEOPOLDI.—One of the finest, 7s. 6d.

TACSONIA BUCHANANI.—A splendid climber; as fine as the Tacsonia Van Volxemi: see figure in the 'Illustration Horticole'; 7s. 6d.

VRIESEA GLAZIOUANA.—A splendid Bromeliaceous plant, which obtained at the Universal Exhibition in Paris the First Prize for the best new Plant, and of which a specimen was exhibited by Miss Zoë de Knyff, under the name of *Chevaliera*. This really splendid ornamental plant is figured in the 'Illustration Horticole.' Fine plants, £1.

AZALEA INDICA FRANCOIS DEVOS (A. VERSCHAFFELT).—This is one of my best seedlings. Flowers very double, deep red, with black spots. See figure in 'Illustration Horticole.' Fine plants, full of buds, 12s.

RHODODENDRON ORNATISSIMUM (A. VERSCHAFFELT).—See the 'Illustration Horticole.' This is my best seedling raised; colour whitish, rose in the centre; the edges are coloured with rose-violet, and the centre is marked with fine golden spots. It is one of the most distinct varieties, and is quite hardy. Good plants, 12s.; do. with buds, £1.

THE GENERAL CATALOGUE, NO. 81,

CAN BE OBTAINED FREE OF

MESSRS. R. SILBERRAD AND SON, 5, HARP LANE, GREAT TOWER STREET, LONDON, E.C.



## HYACINTHS AND OTHER DUTCH BULBS.

WILLIAM CUTBUSH AND SON beg to announce that their Catalogue of the above is now ready, and will be sent on prepaid application.

The Bulbs are unusually fine this Season.

HIGHGATE NURSERIES, LONDON, N.

### BALSAM SEED.

F. AND A. SMITH are now executing orders for their unrivalled Strain of the above in collections of Nine Varieties at 2s. 6d., and Mixed Packets at 2s. and 1s. each. The quality this season is unusually good. Early Orders respectfully solicited. Terms to the Trade on application.

THE NURSERIES, DULWICH, S.

### CAMELLIAS AND AZALEAS, ENGLISH GROWN.

F. AND A. SMITH beg to announce they have a fine Collection of the above, well set with Buds. Prices, moderate, on application.

THE NURSERIES, DULWICH, S.

### FRUITING AND PLANTING VINES FROM EYES.

F. AND A. SMITH can supply Strong, Well-ripened CANES of above. Prices and Lists on application.

THE NURSERIES, DULWICH, S.

### AN ILLUSTRATED SHEET OF ELEGANCES,

Such as Jardinets, etc., for Winter Adornment and Christmas Presents, Now Ready, and sent free on application.

### BARR AND SUGDEN,

THE METROPOLITAN SEED, BULB, AND PLANT WAREHOUSE,  
12, KING STREET, COVENT GARDEN, W.C.

To have **FLOWERS IN YOUR GARDENS ALL THE YEAR ROUND,**

Commence at once planting in succession your beds and borders with Hyacinths, Tulips, Narcissus, Crocus, Snowdrops, Winter Aconites, Ranunculus, Anemones, Scillas, Lilies, and a host of other Bulbous and Tuberous Roots, if the greatest possible variety is desired; also plant Pansies, Daisies, Forget-me-not, Alyssum, Arabis alba, Arabis variegata, Hepaticas, Iberis, Polyanthus, Silene, Wallflower, Sweet-scented Violets, and many other Winter and Spring Flowering Plants. Refer to 'BARR AND SUGDEN'S AUTUMNAL GUIDE TO WINTER AND SPRING GARDENING' (free on application), which gives Directions how and where to plant the above.

To have flowers indoors all the year round, plant at once for succession Hyacinths, Tulips, Polyanthus, Narcissus, Crocus, Iris Persica, Scilla Sibirica, etc.

Collections of Easily Cultivated Bulbs for Out-door Spring Blooming, 10s. 6d., 21s., 42s., 63s., 84s.

Collections of Easily Cultivated Bulbs for In-door Winter Blooming, 10s. 6d., 21s., 42s., 63s., 84s.

Collections of Spring Flowering Plants, 12s. 6d., 25s., 50s., 100s.

For full particulars of these Collections refer to the 'Guide,' page 7.

'BARR AND SUGDEN'S SPRING GUIDE TO THE KITCHEN AND FLOWER GARDEN' is in preparation, and will be sent to all their customers early in January. Strangers desiring copies are respectfully requested to send their addresses at once. Orders amounting to 21s. sent carriage paid.

BARR AND SUGDEN, 12, KING STREET, COVENT GARDEN, W.C.

Perfect Freedom from Coughs in Ten Minutes after use,

AND INSTANT RELIEF AND A RAPID CURE OF

**ASTHMA, CONSUMPTION, INFLUENZA, COUGHS, COLDS,**

AND ALL DISORDERS OF THE BREATH, THROAT, AND LUNGS,

ARE ENSURED BY



UNFAILING CURES OF CONSUMPTION, COUGHS AND COLDS, ASTHMA, AND DISEASES OF THE CHEST AND LUNGS.

Mr. Ward, bookseller, Market Place, Heckmondwike, writes (this week), October 21, 1867:—

"Dr. Locock's Wafers continue to increase in public estimation, notwithstanding the number of rivals they brought into the field."

Cures of Consumption, Asthma, and other Diseases of the Chest and Lungs are regularly occurring.

To Singers and Public Speakers Dr. Locock's Wafers are invaluable for clearing and strengthening the voice, and have a pleasant taste. Price 1s. 1½d., 2s. 9d., and 4s. 6d., per Box. Sold by all Chemists.







TAB. 5677.

CALCEOLARIA PISACOMENSIS.

*Orange-red Calceolaria.*

Nat. Ord. SCROPHULARINEÆ.—DIANDRIA MONOGYNIA.

*Gen. Char. (Vide supra, TAB. 4929.)*

CALCEOLARIA *pisacomensis*; caule robusto stricto erecto superne ramis et inflorescentia pubescentibus v. furfuraceo-tomentellis, foliis breviter petiolatis ovatis obtusis, marginibus recurvis grosse irregulariter crenatis supra rugosis minute scaberulis, subtus glanduloso-pubescentibus, cymis in axillis superioribus suberectis umbellatim multifloris, floribus erectis gracile pedicellatis, calycis lobis late ovatis subacutis, corollæ rubro-aurantiæ labio superiore parvo margine reflexo, inferiore magno adscendente calceiformi, antice sublobulato.

CALCEOLARIA *pisacomensis*. *Meyen, Reise um die Erde, v. 1. p. 469. Walp. in Nov. Act. Acad. Nat. Cur. xix. Suppl. v. 1. p. 396. Rep. v. 111. p. 162.*

This is certainly the handsomest *Calceolaria* that has been introduced for many years; and though, owing to its size, probably unsuited for bedding-out in masses, its robust habit, copious flowers, and beautiful colouring cannot fail to recommend it as one of the choicest recent contributions to the flower-garden. It was imported from Peru by Messrs. Veitch and Sons, through their indefatigable and successful collector, Mr. Pearce, and was originally discovered by the distinguished traveller Meyen, near Arequipa, in Peru. The specimen here figured flowered in Messrs. Veitch's Nursery in August of the present year.

It is very much to be desired that the accession of such fine plants as this would induce cultivators to turn their attention to the extensive genera to which they belong, with the view not only of procuring new species, but of recovering some of their many beautiful once-cultivated congeners. No less than twenty-three handsome species of *Calceolaria* are figured in this Magazine, all from specimens once living in England; probably not half-a-dozen of these now exist in any one collection. Kew ought to possess all, and



will, I hope, recover some; but it is obviously impossible for any single establishment to afford time, space, and labour to cultivate everything worth keeping, greatly as it is to be desired; it is to local institutions and private establishments that we must look for special collections; and if more of the latter would, instead of aiming at all the novelties of the day, strive to form complete collections of certain classes of ornamental plants, the number of these would be greatly increased, and science as well as horticulture be benefited accordingly.

DESCR. A tall, stout, erect perennial. *Stems* glabrous below, pubescent or subtomentose above, obtusely quadrangular. *Leaves* one to two inches long, subsessile, ovate-cordate, obtuse; margins recurved, coarsely irregularly crenate, minutely scabrous above, glandular-pilose below. *Cymes* very numerous in all the upper axils, suberect, umbellate, many-flowered. *Flowers* on slender pedicels, of a rich orange-yellow, passing into bright orange-red. *Calyx lobes* broadly ovate. *Upper lip of corolla* small, reflexed; *lower* large, ascending, slipper-shaped, obscurely lobed in front.—*J. D. H.*

---

Fig. 1. Stem and branch. 2. Flower:—*magnified.*







## NYCTOCALOS THOMSONI.

*Assamese Nyctocalos.*

Nat. Ord. BIGNONIACEÆ.—DIDYNAMIA ANGIOSPERMIA.

*Gen. Char.* *Calyx* parvulus, subcampanulatus, extus infra os æqualiter 5-dentatus. *Corolla* elongato-infundibuliformis, tubo tereti leviter arcuato; lobi 5, subæquales v. inferiore majore, lati, imbricati. *Stamina* 4, cum rudimento subulato quinti, fauce tubi corollæ inserta, didynama, inclusa, filamentis filiformi-subulatis; *antheræ* loculis divaricatis ab apice connectivi apiculati pendulis. *Discus* annularis. *Ovarium* breviter stipitatum, 2-loculare; *stylus* elongatus, filiformis, stigmatibus 2-lamellato; *ovula* numerosa, placentis secus margines septi affixis sub-2-seriatim inserta. *Capsula* lanceolata, plana, septifraga, valvis medio carinatis crasse coriaceis. *Semina* . . . .—Frutices alte scandentes, glabri. Folia opposita, 3-foliolata, foliolis integerrimis. Flores speciosi, in cymas longe pedunculatas dispositi.

NYCTOCALOS Thomsoni; foliolis ovato- v. oblongo-lanceolatis longe acuminate, pedunculis terminalibus, floribus 7-pollicaribus albis.

We have long had in the Herbarium specimens of this very handsome Bignoniaceous plant, which differs wholly in habit from any Asiatic genus hitherto described, and were gathered on the Miku hills, near Gowahatty, in Assam, by Mr. Simons. It was not, however, till about six years ago that living plants were received from Dr. Thomson, F.R.S., then Superintendent of the Calcutta Botanic Garden, and these have flowered during the present year in the Victoria House, at Kew. Though differing in having four stamens instead of five, and these didynamous, it is no doubt a species of the Javanese genus *Nyctocalos*, of Teijsman and Binnendyk, first published in Miquel's 'Journal de Botanique' (vol. i. p. 366), and figured in 1863 by the same author in his great folio work, 'Choix des Plantes Rares ou Nouvelles Cultivées et Dessinées dans le Jardin Botanique de Buitenzorg.' The Assam species resembles the Javanese entirely in foliage, but has much larger and terminal white flowers, those of *N. brunfelsiaeflorus* being only three inches long, of a pale pinkish-purple, and disposed in axillary cymes. The



regular corolla and five equal stamens attributed to the Javanese plant are characters which we should like to see confirmed.

DESCR. A tall, glabrous climber; *branches* slender, terete. *Leaflets* four to six inches long, petiolulate, ovate- or oblong-lanceolate, long-acuminate, membranous. *Flowers* erect, in short, four- to five-flowered cymes, which are borne on slender, terminal, pendulous peduncles as long as the flowers themselves. *Pedicels* short, thick, with minute acute bracteoles. *Calyx* green, with five red-brown teeth on the outside below the margin. *Corolla* seven inches long, pure white, expanding at night and dropping next morning; *lobes* five, very broad and obtuse or retuse, two upper smaller, approximate, lower largest and two-lobed. *Anthers* yellow. *Pod* six inches long and two inches broad, quite flat.—J. D. H.

---

Fig. 1. Portion of corolla and stamens. 2. Calyx, cut open and showing the ovary. 3. Transverse section of ovary. 4. Pod:—all but Fig. 4 magnified.







TAB. 5679.

DENDROBIUM BENSONIÆ.

*Mrs. Benson's Dendrobe.*

---

Nat. Ord. ORCHIDÆ.—GYNANDRIA MONANDRIA.

*Gen. Char. (Vide supra, TAB. 4755.)*

---

DENDROBIUM *Bensoniæ*; caulibus suberectis striatis (floriferis aphyllis) teretiusculis, nodis non tumidis, foliis linearibus acutis emarginatisve, floribus ad nodos solitariis v. in pedunculis 2-3-floris dispositis, bracteis minutis acutis, sepalis oblongo-lanceolatis obtusis albis, petalis late oblongo-rotundatis albis, labello orbiculato concavo integro albo, disco tomentoso læte aureo maculis 2 purpureis basin versus notato, marginibus denticulatis.

---

This beautiful plant belongs to a puzzling set of Dendrobes, natives of the Malayan peninsula, Burma, and Assam, of which *D. Pierardi* (Tab. 2584) is the oldest known member, and *D. crepidatum* (Tab. 4993 et 5011), *D. nodatum* (Tab. 5470), and *D. Bullerianum* (Tab. 5652), more recently discovered members. To the *D. nodatum* the present is, indeed, most closely allied, but differs in the much larger flowers, broader petals, and orbicular labellum, which is rounded at the apex. That intermediate forms, connecting some of these together and with others, will be found, cannot be doubted; meanwhile, as objects of cultivation they differ materially, and it is most important that they should be well figured for ulterior botanical purposes.

*D. Bensoniæ* is a native of Moulmein, and was sent to Messrs. Veitch by an indefatigable collector and horticulturist, Colonel Benson, after whose lady it is named at his own request. Along with it Colonel Benson has sent, as a smaller form, a plant with more acute petals and sepals, and a tendency to have a pointed lip; this is probably referable to *D. nodatum*.

DESCR. *Stems* tufted, one to three feet long, suberect and pendulous, terete, nodes not tumid, internodes one inch long,

DECEMBER 1ST, 1867.



concealed by the membranous sheath. *Leaves* few, on separate stems from the flower, linear, acute or emarginate, two to three inches long, one-third of an inch broad, keeled. *Flower* produced at the joints, usually two or three on a common peduncle, rarely solitary; *bracts* and *bracteoles* very small, acute, pale green, as are the peduncles and pedicels. *Flowers* two inches in diameter, snow-white, except the lip, which has a broad, deep golden-yellow disk, and two purple spots near the base. *Sepals* oblong, obtuse. *Petals* much broader, almost orbicular. *Lip* orbicular, contracted to a short, convolute neck; edges denticulate, surface concave, finely tomentose. *Column* very short.—*J. D. H.*

---

Fig. 1. Column and mentum. 2. Lip:—*magnified*.







TAB. 5680.

BEGONIA ROSÆFLORA.

*Rose-flowered Begonia.*

Nat. Ord. BEGONIACEÆ.—MONÆCIA POLYANDRIA.

Gen. Char. (*Vide supra*, TAB. 4131.)

BEGONIA (§ Huszia) *rosæflora*; acaulis, foliis omnibus radicalibus crasse petiolatis orbiculari-reniformibus basi profunde 2-lobis concavis, marginibus recurvis lobulatis dentatis ciliolatis rubro-marginatis, supra nervis radiantibus impressis bullatis, subtus pallidis, nervis robustis pilosis, stipulis membranaceis, scapis erectis robustis laxè villosis rubris sub-3-floris, bracteis bracteolisque late oblongis obtusis, floribus amplis breviuscule pedicellatis 5-petalis, petalis late roseis orbiculatis emarginatis, filamentis liberis, antheris brevibus latis obtusis, ovario 3-loculari piloso, placentis 2-fidis et lobulatis undique ovuliferis, stylis 3 2-furcatis, cruribus fascia papillosa torta cinctis.

This lovely plant is the second species of *Begonia* allied to *B. Veitchii* (Tab. 5663), which I alluded to under *B. Clarkei* (Tab. 5675), and about the specific distinctness of which I expressed my doubts. In all respects it is much more closely allied to *B. Veitchii* than to *B. Clarkei*, being stemless, with similarly concave leaves and few-flowered scapes; it differs, however very conspicuously, in the stouter red petioles and scapes, in the broader rounder leaves, with very deeply impressed veins (and hence bullate upper surface), in the broad obtuse stipules and bracts, in the villous scape, in the blunt bracteoles close under each flower, in the more numerous flowers, which are of a pale red, like those of the Briar Rose (not the vivid cinnabar-red of *B. Veitchii*), and in the acute wing of the hairy ovary. So many and such conspicuous characters would amongst less variable plants than Begonias abundantly establish these species as distinct, and whether they prove permanent or no, it appears particularly desirable to publish good figures of all these forms on their arrival, and before they fall into the hands of the hybridizers,

DECEMBER 1st, 1867.



by whom the specific characters, of such beautiful and popular plants, will doubtless soon be blended.

*B. rosæflora* was imported by Messrs. Veitch and Sons from Peru, where it inhabits elevations on the Andes of twelve thousand feet. It flowered in July of the present year.

DESCR. A stout stemless herb. *Petioles*, *scapes*, *bracts*, and *stipules* pale or bright red. *Leaves* pale green, two to four inches across, on stout, hairy petioles two to six inches long, orbicular-reniform, very concave, with deeply sunk radiating nerves; margins recurved, lobulate, edged with red, toothed and ciliolate, veins below prominent, hairy. *Stipules* broad, blunt. *Scapes* stout, villous, three-flowered. *Bracts* and *bracteoles* broadly ovate, obtuse. *Flowers* two inches in diameter, bright rose-red. *Petals* five, orbicular, emarginate. *Stamens* very numerous; *filaments* short, free; *anthers* orbicular. *Ovary* hairy, with one short acute wing. *Styles* and *placenta* as in *B. Veitchii*.—J. D. H.

---

Fig. 1. Ovary. 2. Transverse section of ditto. 3 and 4. Stamens:—all magnified.







TAB. 5681.

SACCOLABIUM HUTTONI.

*Mr. Hutton's Saccolabium.*

Nat. Ord. ORCHIDÆ.—GYNANDRIA MONANDRIA.

*Gen. Char. (Vide supra, TAB. 5326.)*

SACCOLABIUM *Huttoni*; caule breviusculo, foliis crasse coriaceis imbricatis breviter loratis carinatis apice 2-lobis, racemis elongatis multisubdensifloris pendulis, floribus secundis erectis, pedunculis floribusque læte roseo-purpureis, sepalis petalisque patentibus subæqualibus late oblongis apice rotundatis, labelli 3-lobi lobis parvis erectis calcar obtuse infundibuliforme incurvum rubro-purpureum coronantibus, lateralibus subquadratis, intermedio angusto.

AERIDES *Huttoni*. *Hort.*

It is difficult to suppose that this lovely plant should have escaped the many zealous Dutch botanical explorers of its native country, Java, or the collectors attached to the magnificent gardens of Buitenzorg, where more tropical plants are cultivated than in any other garden in the world, and named with scientific accuracy. But neither in books nor catalogues do we find any notice of this plant, which was discovered by Mr. Hutton, whose early, lamented death was alluded to under another of his discoveries (*Cymbidium Huttoni*, Tab. 5676) only last month. It flowered in the collection of its importers, Messrs. Veitch and Sons, in September last, and from its vivid colours ranks as the most beautiful species of the genus hitherto in cultivation.

I have referred this plant to *Saccolabium* rather than to *Aerides*, not doubting but that it is congeneric with *S. ampullaceum*, Lindl. (Tab. nostr. 5595), and *S. miniatum*, Lindl. (Tab. 5326); but I must add, that I know of no valid characters by which these genera are to be distinguished, if I am to follow Lindley's collocation of species under each.

DESCR. *Stem* stout, rigid, suberect, closely beset with distichous imbricating foliage. *Leaves* six inches long, loriform.

DECEMBER 1st, 1867.



rigidly coriaceous, keeled, three-quarters of an inch broad, unequally two-lobed at the apex, deep green. *Raceme* from the axils of the lower leaves, a foot long, pendulous, rather slender, very many-flowered. *Bracts* minute. *Flowers* erect, an inch long from base of spur to tip of upper sepal, bright rose-purple, the lip much deeper-coloured; pedicels paler. *Sepals* and *petals* nearly equal, broadly oblong, rounded at the apex, spreading. *Lip* formed chiefly of the stout funnel-shaped, somewhat incurved, obtuse spur, the mouth of which is formed by the three small erect lobes of the lip; of these the lateral are quadrate; the middle is broadly linear and obtuse.—*J. D. H.*

---

Fig. 1. Flower,—*magnified*.







VITIS HETEROPHYLLA, *Thunb.*; var. HUMULIFOLIA.

*Hop-leaved Vine.*

Nat. Ord. AMPELIDEÆ.—PENTANDRIA MONOGYNIA.

*Gen. Char.* Calyx brevis, integer v. 4-5-dentatus v. lobatus. Petala 4-5, libera v. apice calyptratim cohærentia. Discus varius v. obsoletus. Stamina 4-5, infra marginem disci inserta, filamentis subulatis; antheræ liberæ. Ovarium ovoideum v. subquadratum, 2- rarissime 3-4-loculare; stylus brevis v. 0; ovula in loculis 2. Bacca ovoidea v. globosa, 1-2-locularis, 1-2-sperma.—Frutices cirrhi, sarmentosi, sæpe alte scandentes. Folia simplicia v. composita. Flores parvi, in cymas thyrsosve racemosos paniculatos spicatos v. umbellatos dispositi, non raro polygamo-monoici.

VITIS *heterophylla*, Thunb.; var. *humulifolia*; caule tereti gracili glabro v. piloso, foliis profunde 3-5-lobis late cordatis sinu aperto, lobis basi constrictis ovato-rhombeis acutis v. acuminatis serratis, cirrhis 2-fidis, petiolo nervisque pubescentibus, cymis longe pedunculatis dichotome ramosis rarius gracilibus divaricatis, floribus minutis, calyce breviter 5-lobo, petalis liberis, disco membranaceo truncato, baccis sphæricis pallide cyaneis.

VITIS *heterophylla*. Thunb. var.  $\beta$ , Siebold et Zuccarini, *Abhandl. Baier. Akad. Wissenschaft*, iv. v. 2. p. 197.

AMPELOPSIS *humulifolia*. Bunge, *Mem. Sav. Etr. St. Petersb.* v. 2. p. 86. ex Walp. *Rep.* v. 1. p. 441.

Japan contains many species of Vine, of which several are now growing freely in the open-air at Kew against the walls of plant-houses. Amongst these that figured here was conspicuous this autumn for the peculiar colour of its lovely pale blue berries, its bright red stems, and hop-like foliage, which latter character suggested to Dr. Bunge, its discoverer in North China, the very appropriate name of *humulifolia*. It has since been found in Corea, whence dried specimens and seeds have been received from Mr. C. Wilford, collector for the Royal Gardens, and in Japan, where it was found by the celebrated Japanese traveller Siebold.

The *V. humulifolia* was reduced, by Siebold and Zuccarini, to a variety of the old *V. heterophylla* of Thunberg, a plant



that we have growing close by this variety at Kew, and which differs both in appearance and in the scarcely-lobed leaves. By these authors *V. heterophylla* comprises an entire-leaved variety ( $\alpha$ ) and a cut-leaved variety ( $\beta$ ), to the former of which Bunge's *humulifolia* is referred by them; our own specimens, however, of Bunge's plant, received from himself, have deeply lobed leaves, exactly as in our figure. Bunge, indeed, describes his *humulifolia* as having the lower leaves lobed and the upper entire, but in our live plant the lobed foliage is pretty constant throughout, whilst the leaves of our living Japanese specimens of *V. heterophylla* are uniformly entire, or only obscurely lobed throughout.

DESCR. A nearly glabrous, climbing, slender vine. *Stems* two to five feet long; *branches* glabrous or pilose, red, nearly terete. *Leaves* on slender red petioles, three- to five-lobed, with a broad open sinus at the base; *lobes* acutely serrate, middle lobe contracted at the base, dark green and rather rugose above, pale beneath, with pubescent veins. *Tendrils* bifid. *Cymes* on slender peduncles, sparingly divided; *branchlets* divaricate. *Flowers* subumbellate, minute, green. *Petals* five, free. *Stamens* on the margin of a rather membranous annular disk surrounding the ovary. *Berries* globular, of a fine pale china-blue colour, dotted with black.—*J. D. H.*

---

Fig. 1. Bud. 2. Expanded flower:—*magnified.*



# INDEX,

In which the Latin Names of the Plants contained in the Twenty-third Volume of the THIRD SERIES (or Ninety-third Volume of the Work) are alphabetically arranged.

Plate.		Plate.	
5668	<i>Æchmea glomerata.</i>	5656	<i>Epidendrum cnemidophorum.</i>
5641	<i>Agave schidigera.</i>	5643	————— <i>eburneum.</i>
5660	————— <i>xylonacantha.</i>	5671	<i>Epimedium alpinum</i> ; var. <i>rubrum.</i>
5645	<i>Amaryllis pardina.</i>	5665	<i>Erodium macradenium.</i>
5624	<i>Angræcum citratum.</i>	5655	<i>Gloxinia hypocyrtiflora.</i>
5672	<i>Aristolochia Goldieana.</i>	5642	<i>Gomphia Theophrasta.</i>
5628	<i>Barleria Gibsoni.</i>	5622	<i>Grias cauliflora.</i>
5657	<i>Begonia Boliviensis.</i>	5666	<i>Griffinia Blumenavia.</i>
5675	————— <i>Clarkei.</i>	5621	<i>Helianthemum ocymoides.</i>
5680	————— <i>rosæflora.</i>	5625	<i>Impatiens latifolia.</i>
5663	————— <i>Veitchii.</i>	5651	<i>Ipomœa Gerrardi.</i>
5647	<i>Billbergia sphacelata.</i>	5667	<i>Lælia majalis.</i>
5646	<i>Bletia Sherrattiana.</i>	5673	<i>Lilium Leichtlinii.</i>
5619	<i>Bowiea volubilis.</i>	5627	<i>Mesospinidium sanguineum.</i>
5677	<i>Calceolaria pisacomensis.</i>	5644	<i>Myrtus Cheken.</i>
5618	<i>Cattleya Dowiana.</i>	5678	<i>Nyctocalos Thomsoni.</i>
5659	<i>Cestrum elegans.</i>	5632	<i>Oncidium serratum.</i>
5626	<i>Clavija fulgens.</i>	5634	<i>Peperomia arifolia</i> ; var. <i>argyreia.</i>
5674	<i>Cœlogyne humilis.</i>	5629	<i>Pleroma sarmentosa.</i>
5661	<i>Colax jugosus.</i>	5658	<i>Prostanthera nivea.</i>
5636	<i>Cordyline australis.</i>	5669	<i>Rondeletia Purdiei.</i>
5620	<i>Curcuma Australasica.</i>	5653	<i>Rudgea macrophylla.</i>
5676.	<i>Cymbidium Huttoni.</i>	5635	<i>Saccolabium giganteum.</i>
5640	<i>Dalechampia Roezliana.</i>	5681	————— <i>Huttoni.</i>
5679	<i>Dendrobium Bensoniæ.</i>	5630	<i>Sarcanthus erinaceus.</i>
5652	————— <i>Bullerianum.</i>	5631	<i>Siphocampylus Humboldtianus.</i>
5649	————— <i>macrophyllum</i> ; var. <i>Veitchianum.</i>	5648	<i>Stemonacanthus Pearcei.</i>
5638	<i>Dictyopsis Thunbergii.</i>	5633	<i>Synadenium Grantii.</i>
5639	<i>Dombeya Mastersii.</i>	5623	<i>Tapeinotes Carolinæ.</i>
5650	<i>Draba violacea.</i>	5670	<i>Thapsia decipiens.</i>
5662	<i>Dracæna surculosa</i> ; var. <i>maculata.</i>	5637	<i>Tinneæ Æthiopica.</i>
5664	<i>Epidendrum Brassavolæ.</i>	5682	<i>Vitis heterophylla</i> , <i>Thunberg</i> ; var. <i>humulifolia.</i>
5654	————— <i>Cooperianum.</i>		



# INDEX,

In which the English Names of the Plants contained in the Twenty-third Volume of the THIRD SERIES (or Ninety-third Volume of the Work) are alphabetically arranged.

Plate.	
5668	Æchmea, crowded-flowered.
5660	Agave, woody-thorned.
5641	Aloe, splintered-leaved American.
5645	Amaryllis, spotted-flowered.
5624	Angræcum, citron-yellow.
5672	Aristolochia, The Rev. H. Goldie's.
5625	Balsam, broad-leaved Cingalese.
5628	Barleria, Dr. Gibson's.
5671	Barren-wort, red-flowered.
5657	Begonia, Bolivian.
5675	—— Major Trevor Clarke's.
5680	—— rose-flowered.
5663	—— Veitch's.
5646	Bletia, Sherratt's.
5619	Bowiea, twining.
5677	Calceolaria, orange-red.
5618	Cattleya, Captain Dow's.
5644	Chequen of Chili.
5647	Chupon of Chili.
5626	Clavija, brilliant-flowered.
5661	Colax, furrowed-lipped.
5676	Cymbidium, Mr. Hutton's.
5640	Dalechampia, Roezl's.
5679	Denrobe, Mrs. Benson's.
5649	—— Large-leaved; <i>Veitch's</i> <i>var.</i>
5652	Dendrobium, Mr. Wentworth Buller's.
5638	Dictyopsis, Thunberg's.
5639	Dombeya, Dr. Masters's.
5650	Draba, violet-flowered.
5662	Dracæna, long-shooting; <i>spot-</i> <i>ted-leaved var.</i>
5664	Epidendrum, Brassavola-like.

Plate.	
5654	Epidendrum, Mr. Cooper's.
5643	—— ivory-flowered.
5656	—— sheathed.
5655	Gloxinia, Hypocyrtia-flowered.
5642	Gomphia, Theophrasta-like.
5666	Griffinia, Dr. Blumenau's.
5659	Habrothamnus, purple.
5651	Ipomœa, Gerrard's.
5667	Lælia, May-flowering.
5673	Lily, Max Leichtlin's.
5627	Mesospinidium, Rosy.
5633	Milkbush, Captain Grant's.
5678	Nyctocalos, Assamese.
5632	Oncidium, serrated.
5622	Pear, Anchovy.
5634	Peperomia, Arum-leaved; <i>silver-</i> <i>striped var.</i>
5674	Pleione, dwarf.
5629	Pleroma, sarmentose.
5658	Prostanthera, snow-white.
5621	Rockrose, Basil-like.
5669	Rondeletia, Mr. Purdie's.
5653	Rudgea, large-leaved.
5635	Saccolabium, gigantic.
5681	—— Mr. Hutton's.
5630	Sarcanthus, hairy-stemmed.
5631	Siphocampylus, Humboldt's.
5648	Stemonacanthus, Mr. Pearce's.
5665	Storksbill, spotted-flowered.
5623	Tapeinotes, Empress Charlotte's.
5670	Thapsia, Madeiran.
5637	Tinnea, violet-scented.
5636	Ti-tree, New Zealand.
5620	Turmeric, Australian Wild.
5682	Vine, hop-leaved.



# WORKS ON FERNS AND MOSSES.

---

**BRITISH FERNS;** an Introduction to the Study of the FERNS, LYCOPODS, and EQUISETA indigenous to the British Isles. With Chapters on the Structure, Propagation, Cultivation, Diseases, Uses, Preservation, and Distribution of Ferns. By M. PLUES. Crown 8vo, 16 Coloured Plates, drawn expressly for the work by W. FITCH, and 55 Wood-Engravings, 10s. 6d.

One of L. Reeve and Co.'s 'New Series of Natural History for Beginners,' accurately describing all the Ferns and their allies found in Britain, with a Wood-Engraving of each Species, and Coloured Figures of 32 of the most interesting, including magnified dissections showing the Venation and Fructification.

**THE BRITISH FERNS;** or, Coloured Figures and Descriptions, with the needful Analyses of the Fructification and Venation, of the Ferns of Great Britain and Ireland, systematically arranged. By Sir W. J. HOOKER, F.R.S. Royal 8vo, 66 Coloured Plates, £2. 2s.

The British Ferns and their allies are illustrated in this work, from the pencil of Mr. FITCH. Each Species has a Plate to itself, so that there is ample room for the details, on a magnified scale, of Fructification and Venation. The whole are delicately coloured by hand. In the letterpress an interesting account is given with each species of its geographical distribution in other countries.

**GARDEN FERNS;** or, Coloured Figures and Descriptions, with the needful Analyses of the Fructification and Venation, of a Selection of Exotic Ferns, adapted for Cultivation in the Garden, Hothouse, and Conservatory. By Sir W. J. HOOKER, F.R.S. Royal 8vo, 64 Coloured Plates, £2. 2s.

A companion volume to the preceding, for the use of those who take an interest in the cultivation of some of the more beautiful and remarkable varieties of Exotic Ferns. Here also each Species has a Plate to itself, and the details of Fructification and Venation are given on a magnified scale, the Drawings being from the pencil of Mr. FITCH.

**FILICES EXOTICÆ;** or, Coloured Figures and Descriptions of Exotic Ferns, chiefly of such as are cultivated in the Royal Gardens of Kew. By Sir W. J. HOOKER, F.R.S. Royal 4to, 100 Coloured Plates, £6. 11s.

One of the most superbly illustrated books of Foreign Ferns that has been hitherto produced. The Species are selected both on account of their beauty of form, singular structure, and their suitableness for cultivation.

**FERNY COMBES;** a Ramble after Ferns in the Glens and Valleys of Devonshire. By CHARLOTTE CHANTER. *Third Edition.* Fcp. 8vo, 8 Coloured Plates by FITCH, and a Map of the County, 5s.

**HANDBOOK OF BRITISH MOSSES,** comprising all that are known to be Natives of the British Isles. By the Rev. M. J. BERKELEY, M.A., F.L.S. Demy 8vo, 24 Coloured Plates, 21s.

A very complete Manual, comprising characters of all the species, with the circumstances of habitation of each; with special chapters on development and structure, propagation, fructification, geographical distribution, uses, and modes of collecting and preserving, followed by an extensive series of coloured illustrations, in which the essential portions of the plant are repeated, in every case on a magnified scale.

---

L. REEVE & CO., 5, Henrietta Street, Covent Garden.

---

**SEWING MACHINES.**—The **FLORENCE.** Purchasers should see the *Florence*, which has been awarded a *Silver Medal*, the *Highest Premium* for a *Family Sewing Machine*, at the **PARIS EXPOSITION**, July, 1867. It also received the *Highest Prize*, a *Gold Medal*, at *Exhibition of the American Institute*, New York, 1865 (*in competition with every well-known Machine*). It makes *four different stitches*, including the *Lock Stitch*, has patent reversible feed-motion, fastens off its seam without stopping, and executes in a superior manner all kinds of Sewing ever required in a family. We warrant it superior to all others for family use. *If any purchaser of the FLORENCE is dissatisfied with it, after a fair trial, we will give in exchange any Sewing Machine of similar price known to the trade.* Prospectus and Samples of work, post-free. Agents Wanted. Address, **FLORENCE SEWING MACHINE COMPANY**, 97, Cheapside, London. Agents: **MAY and SHAW**, Soho Bazaar (Oxford Street Entrance), London.



# HEATING BY HOT WATER.

---

It is now generally admitted that Buildings of any kind can be more effectually warmed by Hot Water than by any other means; but as so much depends on the way in which the Apparatus is fixed, it is of the greatest importance that it be done by experienced men.

J. JONES & SONS have every facility for executing work in the best manner at a moderate cost, and having the largest stock in the Kingdom of Boilers, Pipes, etc., they can complete work without delay, their great experience in Hot Water Heating enables them in all cases to supply an Apparatus best suited to the purpose for which it is intended, and they will be happy to send to any part of the Country, at a moderate charge, to take particulars of work and prepare plans, etc., or on receipt of particulars per post they will forward estimates free of charge.

J. JONES & SONS having been so extensively patronized for many years by the Nobility, Clergy, Gentry, and others, are enabled to give references to work done in nearly every part of the Kingdom.

J. JONES & SONS are prepared to estimate for Warming, to any extent,—

CHURCHES.	GREENHOUSES.	HALLS AND PASSAGES.
CHAPELS.	CONSERVATORIES.	PICTURE GALLERIES.
SCHOOLS.	VINERIES.	MUSIC ROOMS.
LECTURE HALLS.	HOTHOUSES.	BILLIARD ROOMS.
BANKS.	FORCING PITS.	BATHS.
PUBLIC OFFICES.	PINE STOVES.	DRYING CLOSETS.
WAREHOUSES.	PEACH HOUSES.	COACH HOUSES.
FACTORIES.	ORCHARD HOUSES.	HARNESS ROOMS.

J. JONES & SONS' Apparatus is simple in construction, moderate in cost, and economical in working.

It is equally available for the Amateur's Greenhouse, or the longest range of Forcing Houses; for the smallest Chapel or the largest Church; for Private Offices, or those of Public Companies.

It is admirably adapted for Dwelling Houses, as coils of pipes can be placed in any part, for warming the various rooms. One or more Baths may be heated from the same boiler, and a constant supply of hot water obtained in any part of the house.

For Warehouses and Workshops this system of heating is unsurpassed, as, unlike stoves and hot-air flues, the circulation of hot water in pipes is perfectly safe, and the management of Apparatus can be left to any ordinary workman.

---

**J. JONES & SONS,**  
**IRON MERCHANTS AND HORTICULTURAL ENGINEERS,**  
**6, BANKSIDE, SOUTHWARK, LONDON, S.E.**